



**PHD**

**An investigation into how B2B decision-makers utilise resources in their marketing decision-making**

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# An investigation into how B2B decision-makers utilise resources in their marketing decision- making

Volume 1 of 1

Suthasinee Susiva

A thesis submitted for the degree of Doctor of Philosophy  
University of Bath  
School of Management  
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(Suthasinee Susiva)

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## ABSTRACT

Everyone makes decisions, some simple, others complex. In business-to-business (B2B) marketing environments, decision-making becomes even more complicated. The decision-makers require an adequate set of facts to support their decision-making. In order to provide the necessary decision-support, B2B organisations invest huge amounts of money in information systems such as enterprise resources planning applications, customer relationship management software, and other types of databases. These systems store, analyse, manipulate and/or integrate internal data and perhaps force-feed it to the decision-makers; what we call a *foie-gras approach*. On the other hand, organisations may allow the decision-makers to search for the desired facts or decision-support by themselves; what we refer to as *anarchic resources utilisation*. Alternatively, the decision-makers may utilise resources with a combination of the two approaches. Previous studies have shown that many factors may influence the resources utilisation; however, not many studies have been conducted in the B2B context. This research, therefore, aims to provide a better understanding of how decision-makers utilise the available resources by firstly identifying B2B factors affecting the resources utilisation, and then explaining how these factors influence them. Results from in-depth interviews with the marketing decision-makers from three case studies show that the value of customers, supplier-customer relationships, and the nature of demand are the most influential B2B factors affecting the resources utilisation of the decision-makers. Other factors such as experience, nature of decisions, and management style are also found to have considerable impact on the approach the decision-makers adopt. In order to provide adequate decision-support, the providers may need to consider these factors and understand their effects on the decision-makers in the organisation, and design or choose the right information system(s); this should then result in better quality decisions.

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# **CHAPTER 1**

## **INTRODUCTION**

In order to give a general idea of this thesis, this chapter started with a brief explanation of background of this research (section 1.1). The research questions will then present in section 1.2. A short description of the research design employed in data collection and data analysis in order to achieve the research objectives will be introduced in section 1.3. After that, the value of this study will be illustrated in section 1.4. Lay out of this thesis will be introduced in section 1.5.

### **1.1 Background of the Thesis**

Everyone has to make decisions; some are simple others complex. Decision-making for organisations can be far more complicated than that for individuals (Webster & Wind 1972: 12). Organisational decision-making may involve more than one individual and as such, may need decision-support to reach optimal solutions. In an organisation, various types of decisions need to be made. This study, however, focuses only on 'marketing decisions', which are action-oriented and relate to marketing activities including thoughts and judgments made by an individual or a group in order to choose a certain action through a set of alternative choices (Matsatsinis & Siskos 2003a: 3-4). According to Raymond, Brisoux and Azami (2001: 34-35), marketing decisions can be categorised under the alternatives made with regard to market targets and the marketing mix as product decisions, pricing decisions, distribution decisions, and communication decisions. Moreover, marketing decisions are also implicated in potential opportunities and problems foreseen by marketing decision-makers, and also with how to realise opportunities and overcome problems (Malhotra & Birks 2003: 4-5).

The American Marketing Association (AMA) defines marketing as:

The process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organisational objectives (Hakansson, Harrison, & Waluszewski 2004: 1).

The above definition is derived from traditional economics theory. As a result, marketing concepts have been founded on certain assumptions. First, the agents are independent and rational, acting toward goals that are absolute and consistent, and do not influence each other. The resources exchanged in order to reach the goals are considered homogeneous i.e. the value is independent of how they are combined (Hakansson *et al.* 2004: 3). In business markets, these assumptions seem to be oversimplified. The actors and resources are dependent; they interact with each other as a network in order to perform activities. Resources in fact are heterogeneous i.e. the value depends on how they are combined. In a book “Rethinking Marketing”, arguments of the pros and cons of traditional marketing concepts are presented (Hakansson *et al.* 2004: 3). An alternative definition of marketing, which will be used in this thesis, derives from the presence of dynamic and interdependency and is as follows:

Marketing is about active counter parties’ creation of an exchange of resources, when those features are never fully known (Hakansson *et al.* 2004).

Marketing decisions, therefore, deal not only with specific marketing issues but also with the utilisation of the resources and its subsequent outcomes. Any utilisation of resources requires interactions between the decision-makers and the resources. In order to understand the interactions in any market networks, various models have been proposed and tested within various fields (e.g. Ford 2002; Hakansson & Johansson 2002; Iacobucci, Henderson, Marcati, & Chang 1996; Powell, Koput, & Smith-Doerr 1996; Welch & Wilkinson 2002; Wilkinson 2001). However, the model of Hakansson and Snehota (1995), Actors-Resources-Activities (ARA) model seems to be the most appropriate one to be a fundamental to study roles of actors and their networks in industrial development processes under both industrial stability and development (Hakansson *et al.* 1995). Moreover, the

model also allows the researcher to understand the interactions between the three layers: actors, resources, and activities in which they are involved with any decisions. Thus, the ARA model has been chosen as a key theoretical standpoint for this study in which a further discussion on the ARA model and how it emerged from the literature will be presented in the next chapter. The three layers could be drawn in relation to decision-making process as shown in Table 1.1.

**Table 1.1: Three subjects involved in marketing decision-making process**

Elements	Actual focuses of this study	Attributes
Actors	Marketing decision-makers	<ul style="list-style-type: none"> <li>• Control resources</li> <li>• Perform activities</li> <li>• Have knowledge of resources and activities</li> </ul>
Resources	Human beings and physical facilities e.g. people, information systems, other facilities	<ul style="list-style-type: none"> <li>• Heterogeneous</li> <li>• Mutually dependent</li> <li>• Controlled by one or more actors</li> <li>• Linked to each other by means of activities</li> </ul>
Activities	Decision-making and its related activities	<ul style="list-style-type: none"> <li>• Transformation acts</li> <li>• Transaction acts</li> <li>• Performed by actors</li> </ul>

Adapted from: Hakansson & Johansson (2002), pages: 145-9.

**Actors** or decision-makers could be individuals, groups of individuals, organisations, groups of organisations, or parts of organisations who control resources, perform activities and have knowledge about them (Hakansson *et al.* 2002: 145). Almost everyone in an organisation makes decisions. Considering who actually makes decisions related to marketing, the answer would be marketing executives, marketing managers, assistants to marketing managers, sales staff, and secretaries (Higby & Farah 1991: 31; Li, McLeod & Rogers 2001: 76).

**Resources** refer to any means including human-being, information systems, and physical facilities which are heterogeneous and mutually

dependent (Hakansson *et al.* 2002: 147). They are controlled by one or more actors and are linked to each other by means of activities that change or can be exchanged by them. They could be people (e.g. colleagues and friends), information systems (e.g. Marketing Information Systems (MkIS), Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM)), and/or physical facilities (e.g. computers, books, magazines, and newspapers).

The concept of 'Marketing information system (MkIS)' was defined by many authors (e.g. Cox & Good 1967; Kotler 2001; Li & McLeod 1993; Piercy & Evans 1994; Sisodia 1992). MkIS is one or more information system(s) that includes people, equipment, and procedures used to collect, store, analyse, and generate marketing decision-support (e.g. Assmus 1977; Cox *et al.* 1967; Kotler 2001; O'Brien & Schoenbachler 1995; Sisodia 1992). Hence, in this study, the term 'resources' will be used interchangeably to 'MkIS' as it is the main source to support marketing decision-makers.

**Activities**, in this study, focus only on decision-making and its related occurrences, which are transformation or transaction acts performed by the decision-makers with the existing resources and the surrounding networks to reach the optimal solutions. Decision-making, however, is very subjective. An assumption needs to be made to frame the discussion, that is, decision-makers have the ability to choose between two or more alternatives; a 'sole choice' is not considered to be a problem (Bazerman 2001: 2-3; Matsatsinis *et al.* 2003a: 3-4).

With increasing competition, decision-makers are forced to improve their decisions. Effective decision-making may require the existence of timely and valid information (Matsatsinis & Siskos 2003b: 85). Decision-makers need relevant means of support, readily available for their use at the right time in order to arrive at an appropriate decision (Bhamhra & Chaudhary 1999). Decision-support could be data, information, or any other inputs considered a valid means to improve decision-making. The potential variety and complexity involved in managing decision-support may present significant constraints to 'optimal decisions'. Insufficient and inaccurate decision-support may lead to poor decisions with consequent damages for an organisation, such as waste of time and/or money (Matsatsinis *et al.*



2003b: 85-86), and potentially damaged relationships with customers or suppliers. Decision-makers, therefore, ought to know and understand nature of decision-support they want, and how they will obtain it.

In attempting to improve the decisions, business-to-business (B2B) organisations invest huge amounts of money in marketing information. According to the 2003 Marketing Facts Book (2003: 20), 21 billion US dollars were spent on marketing information worldwide by B2B organisations. \$3.795 billion and \$14.79 billion were spent respectively in Europe, Middle East and Africa (EMEA), and the United States. This has been forecasted to increase by 26.3% worldwide, 27% in the United States, and 23.4% in EMEA by the year 2006. These figures demonstrate the enormous investments devoted to marketing information in B2B organisations and, with the potential growth figures, the increasing importance of marketing information in decision-support.

#### **1.1.1 Distinctive characteristics of B2B marketing**

In B2B markets, business relationships can be encapsulated with the words 'continuity', 'complexity', 'symmetry', and 'informality' (Hakansson *et al.* 1995: 7-8). 'Continuity' means the period of repeated business transactions; it has been reported in several studies that ten to twenty years is an average time span to maintain a business relationship with major customers or suppliers. 'Complexity' may emerge due to the many parties that can be involved in the relationships; it is not one-to-one, or one-to-many like direct marketing or business-to-consumer (B2C) marketing. The relationships typically involve numerous people, who generally have very different status, organisational roles, and personal backgrounds. It becomes even more complicated when two parties in a business relationship have different goals. 'Symmetry' can be seen in terms of both B2B parties usually having to balance their resources and capabilities, requiring far more interactions and negotiations compared with the consumer marketing. 'Informality', even though formal contracts are commonly written, is however seen to be an ineffective means of handling uncertainties, conflicts, and crises. Informal mechanisms built on experience such as trust and confidence have been pointed out in several studies to be more effective in B2B context (Hakansson *et al.* 1995: 8).

Other distinctive characteristics of business markets may combine to create decisions that can be seen to be more complex in comparison with consumer marketing. Decision-making in B2B organisations involves numerous people at various levels within the organisation (Quigley, Bingham & Patterson 1994: 103). The importance of supplier-customer relationship may lead the organisation to adapt themselves to their environment or integrate with them. For example, in closed relationships, organisations may adapt their products or services to meet the need of a particular customer's requests, or they may integrate their information systems with the customer's to share the information.

### **1.1.2 Resources utilisation**

The decision-makers should understand their role and influence on the decision process, their required 'facts'<sup>1</sup> and the way they will use and acquire those 'facts' to arrive at the most appropriate decisions (Quigley *et al.* 1994; Webster *et al.* 1972). In other words, the decision-makers may need to understand how to perform the activities i.e. decision-making by utilising the resources properly. Decision-makers may utilise resources in various ways. They may exploit them on an ad-hoc (i.e. concerned with a particular purpose) basis. For instance, they may conduct marketing research or talk to their colleagues to obtain decision-support regarding a specific problem. The results may provide them with appropriate information or even open their eyes to the nature of the decision-support they require, the way to obtain, analyse and interpret that support as well as the time and budget needed to gather it (Wee 2001).

Decision-makers may gather decision-support from any resources (e.g. people, information systems, and physical facilities) available within their organisation including MkIS. MkIS could be either paper- or computer-based (Assmus 1977; Cox *et al.* 1967; O'Brien *et al.* 1995; Sisodia 1992). As its name suggests, MkIS is generally designed in order to be able to provide required 'facts' to decision-makers in a form they can use to arrive at appropriate decisions (Bhamhra *et al.* 1999: 1-2). It delivers not only specific information about a particular issue, but also organisational entities for managing 'facts' (Cox *et al.* 1967: 145-6). It also provides integrated,

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<sup>1</sup> Facts, in this study, refer to any data, information, or knowledge accepted by the decision-makers to support their decision-making.

analytical, systematic approaches to identify, assemble, analyse, synthesise, process, store, recall and communicate relevant 'facts' in the right format and at the right time to the decision-makers (Bhamhra *et al.* 1999: 8-9). MkIS may thus offer a better means of continuous support for decision-makers, if it has been developed based on the marketing objectives an organisation seeks to fulfil.

## **1.2 Research question**

Many researchers suggest that decision-makers act differently due to many factors such as nature of decisions (Bazerman 2001), their experience (Miller, Hickson, & Wilson 1997), and available resources (Fletcher 1990). The ways they utilise available resources may also be different. Decision-makers may employ the resources in a variety of manners with two bi-polar extremes that can be termed as 'foie-gras' and 'anarchy'.

In the context of being force-fed, foie-gras decision-makers may be nourished with resources such as software packages (e.g. ERP, CRM, Marketing intelligence) to generate decision-support. The term foie-gras<sup>2</sup> is derived from the production process of the gourmet delicacy - pâté de foie gras. In order to produce this rich savoury paste, geese are force-fed a diet of corn, not for the benefit of the goose, but to produce a known quality end product; a goose liver with particularly desirable features. In a similar manner, those resources may provide decision-support to the decision-makers by feeding them with the facts they may need to produce their known quality end product. In determining what facts or decision-support the decision-makers require, system designers (or system developers) may make autocratic decisions based on certain considerations by feeding of specific data that allows decision-makers to obtain accurate, timely, and cost-effective decision-support. The designers, however, have to understand the entire context of the decisions, and the required facts. Such an understanding could be problematic due to the great array of operational, administrative, and strategic marketing decisions with which the decision-makers may be dealing. Since each level has its own functions and requirements, the required sets of facts are different in each case. Moreover, the personal style of the decision-maker is another factor

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<sup>2</sup> This term, foie-gras, is come out from a discussion with supervisor on how decision-makers may utilise resources to support their decisions.

that needs to be considered because each person will have his or her own style of thinking and rationality (Leonard & Scholl 1999: 407-408). The uncertainty of market conditions and competitive activities are significant factors affecting the nature of decisions and these are difficult to forecast or predict (Ashill & Jobber 1999; Ashill & Jobber 2001). In covering all these eventualities, designers may feed the decision-makers far too many facts. Decision-makers may be able to cope by digesting the relevant ones and simply discarding the remainder. However, if they do not possess the level of discernment to permit recognition of the most salient facts they become as foie gras geese, engorged, swollen and congested.

An alternative and diametrically opposed means, anarchy, is similar in principle to the 'garbage can model' (Cohen, March, & Olsen 1972). Rather than attempting to 'systematise' the decision-making process, the decision-makers may generate a repository of databases, customised decision-support, a whole array of quantitative and qualitative data that may enable them to create their own decision-support (Miller *et al.* 1997: 303). The creative process may allow 'new' forms of decision-support to emerge, new connections to be made with the original data or information, and new insights to be uncovered. They, however, know exactly what they should look for; they may take a very narrow or distorted view of their decision-making responsibilities; they may be acting in a manner that is not consistent with their colleagues. They may not ultimately be contributing to an organisational understanding of the nature and scope of the decisions that an organisation is faced with, and what decision-support may successfully lead them to the most appropriate decisions.

Foie-gras, therefore, is a highly structured process of feeding decision-makers, while anarchy is highly unstructured. Each way has its own advantages and disadvantages in terms of accuracy, time, manner, and cost effectiveness. They are also distinct in aiding decision-makers and organisations to understand the nature of decision-support required the method of gathering and analysing the information, how long it takes to complete the project, and the budget needed for the task. For example, being totally foie-gras, organisation would benefit from saving times and budgets spending on gathering facts to generate decision-support, however, it could also generate an inaccurate and/or obsolete decision-

support. On the other hand, being totally anarchy, the organisation would benefit from experiences of decision-makers, who having freedom to gather facts by themselves, so the decision-support would come in the right manner and higher accuracy to match their demands; however, it may take time and money to obtain the decision-support.

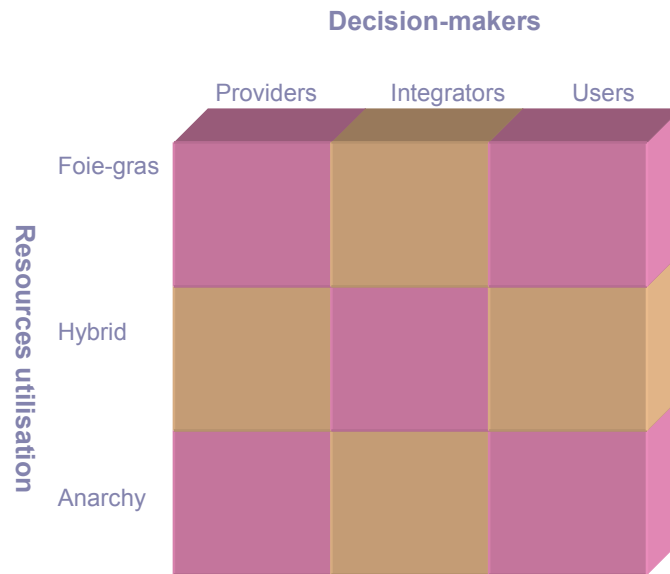
The two ways of resources utilisation may be seen as extremes in terms of structured and unstructured approaches. In fact, the decision-makers may not have to choose either foie-gras or anarchy; they may settle on an optimal combination that is appropriate. Figure 1.1 illustrates possible links between resources utilisation and decision-makers within an organisation. As can be seen in the figure, the actors or the decision-makers could be divided into three different groups according to their interactions with the resources. The first group is called providers<sup>3</sup>, as the name suggested, who provide resources to the others in the organisation. The providers include information system designers, developers, system analysts, and others who only provide resources. The second group is users<sup>4</sup> who only utilise resources provided by either providers or integrators. The integrators are those who both provide and use resources to support their decision-making. A decision-maker in an organisation could be classified as a user when dealing with a certain decision, and become an integrator in another situation. Similarly, a provider could become an integrator when dealing with some decisions. However, a user in a decision would never act as a provider in any circumstance.

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<sup>3</sup> The terms 'providers' is used and referred to resource providers in the book called "Developing Relationships in Business Networks" by Hakansson and Snehota, 1995.

<sup>4</sup> The terms 'users' is also used in referring to the one who make use of resources in the same book "Developing Relationships in Business Networks" by Hakansson and Snehota, 1995

**Figure 1.1: Resources Utilisation VS Decision-Makers**



This research focuses on MkIS within a B2B context, in particular how B2B marketing decision makers utilise resources to support decisions. This focus helps to understand how actors interact with their resources and surrounding networks to obtain their desired decision-support.

In order to achieve this aim, the following two sub-questions need to be answered.

1. What factors affect the utilisation of resources for B2B decision-makers in their decision-making process?
2. How do these factors affect the utilisation of resources for B2B decision-makers?

In order to investigate the above questions, case study interviews will be conducted in order to understand what factors affect resources utilisation and how the decision-makers make use of the resources to support their decision-making. The following section is devoted to a brief description of the approach used for data gathering and data analysis in order to answer the research questions above. Further discussion regarding the research methodology and methods employed in this research will be presented in Chapter 4.

### **1.3 An Introduction to Research Design**

A case study approach is employed as a research method to gather and analyse data in order to reach the research objectives. Three cases are selected based on the fact that they work solely in a B2B environment, that is to say, the three companies have dealt with only business customers who purchase products for reselling or using as raw materials, not for their consumption. The three companies are Siam City Cement Public Company Limited, Nong Yai Industry Company Limited, and Thai Olympic Fibre-Concrete Company Limited, and will be referred to as Siam City Cement, NY Sugar and Olympic, respectively. These three companies are located in Thailand, operating with both domestic and foreign customers who are, for example, traders, wholesalers, retailers, and industries.

Access has been another issue to consider when choosing the companies as cases for this research. It is considered to be difficult to obtain permission to interview decision-makers who are the key persons in each company. Moreover, data related to decision-making can be considered as relatively confidential information. The companies listed above were therefore selected from the ones that the researcher has relationships, either personal or business, with the owners or managers. After obtaining permission, in-depth interviews with select respondents took place, using an interview guide (Presented in chapter 4) to ensure that fair and similar questions are asked to all the respondents. Respondents were then chosen based on the referral of the previous interviewees. In each case, the number of respondents varied from one to over twenty people depends on number of people worked in the area related to marketing decisions and decision-support. The interview ended when the respondents repeated the answers of the others who worked in a similar area, i.e., starting of redundancy. The interviews lasted from half an hour to over three hours depending on the time available of each respondent. All interviews were recorded in digital format using minidisks, and were then transcribed into rich text format files (RTF) to be compatible with NVIVO. Content analysis was employed to analyse the data i.e. to categorise the data into themes according to the conceptual frameworks presented in the following chapter. A brief discussion of the potential contributions is presented in the following section (1.4).

#### **1.4 The Contribution and Value of the Study**

Competition in the market, nowadays, is intensifying; many changes occur all the time. The dynamics of the market increase the complexity of decisions more and more. Since the 1960s, information systems have been introduced to marketing departments in order to assist decision-makers in reaching optimal decisions (Kotler 1966). However, most of them have failed in the implementation or have turned out to be not as good as expected (Cox *et al.* 1967; Desai, Wright, & Fletcher 1998; Fletcher *et al.* 1994; Ryals & Knox 2001). Two significant reasons for failure have been computer technology and people (Cox *et al.* 1967; Jobber & Rainbow 1977). With many improvements in the former, nowadays, this is no longer significant (Fletcher *et al.* 1994). People or actors, however, remain a vital obstacle as a result of human errors and emotional involvement (Fletcher *et al.* 1994). Interactions among the decision-makers (i.e. the users, the providers, and the integrators) to gain access to each other's resources, and between the actors and the resources are essential to obtain decision-support. With regard to this, this research attempts to understand those interactions of the actors in order to access the required resources, and use them to support their decision-making. The results of this research may be useful to both academics and practitioners.

For academics, much research that focuses on resource management has been developed based on the classical assumption of marketing i.e. homogeneity and one-directed dependence (Hakansson *et al.* 2004). Therefore, it may not be applicable in B2B organisations due to the fact that the resources in business markets are heterogeneous and mutually dependent. Moreover, most B2B research has emphasised the supply chain and relationship management (Wilkinson 2001), but has not yet been greatly concerned with resources utilisation and decision-making. This research is attempting to fill this gap by attempting to understand how decision-makers utilise resources to support their decision-making in B2B organisations by determining the factors affecting resources utilisation, and provide understanding of how these factors influence it.



For practitioners, in general, this research will provide a better understanding and aid in designing information systems or selecting software packages and perhaps obtaining successful information system implementations in B2B organisations. Benefits to different stakeholders are various, for instance, system designers could use the findings as guidelines for what factors need to be considered when they design a new system or improve an existing one. These findings could also be used as guidelines for providers to communicate with users in order to understand their needs for decision-support. Another benefit to the designers is that the findings may help them to design information systems that the users would like to use (i.e. user friendly) and may result in the more powerful ones.

For the decision-makers, the outcomes could help them to determine the most appropriate ways to reach the decision-support they need, from understanding, the identified factors affecting their resources utilisation. They would know what they actually wanted, and then they might employ the findings as a principle in communication with the providers to obtain the most appropriate decision-support. Moreover, the research may assist them to understand what types of support they would like, and how they would like to obtain it. Although this research is case-study based, any B2B organisation, however, could benefit from this research, since the conceptual framework is developed based on general information from the literature. Organisations may use the findings as guidelines to ensure that the existing systems are appropriate for the users, and to determine which systems should be improved and implemented. With the results, organisations should be able to decide what are the best systems for their people and may result in the most effective systems in supporting the decision-making.

### **1.5 Layout of this thesis**

For ease of reading, this thesis is arranged into nine chapters including this one. The other eight chapters are as follows:

- Chapter 2 discusses theoretical standpoints and frameworks; key theoretical concepts are synthesised; shows how the frameworks emerged from the literatures.

- Chapter 3 introduces the research framework, narrows down the scope of the study leading to the refinement of the research questions.
- Chapter 4 discusses and justifies the methodology and the methods employed in this thesis.
- Chapters 5, 6 and 7 show the results obtained from each case; NY Sugar, Siam city cement, and Olympic, respectively.
- Chapter 8 consists of a cross case analysis which discusses the findings originated from the three cases and compare and contrast the results with the literatures.
- Chapter 9 summarises the overall thesis, links the findings to the theoretical background and discusses the study's contributions, limitations, implications for the future research.

## **1.6 Conclusion**

In order to make appropriate decisions, decision-makers need information, which is accurate, reasonable, and acceptable; more importantly, it needs to be on time and within a certain budget. Organisations also apply various information technologies such as ERP, databases to provide the data or information the decision-makers may require to enhance the decision-making process. This research aims to understand how the B2B marketing decision-makers utilise existing resources to support their decision-making. In order to reach the aim, factors affecting the way the decision-makers utilise the resources ought to be identified. The effect of each factor on the resources utilisation need then be determined. Case studies were employed in order to obtain the data for this thesis. Three cases have been selected on the basis of working environment and access; in other words, the cases are B2B organisations with which the researcher has a connection and which are reasonably accessible. The three cases, therefore, are related to companies working in various industries in Thailand i.e. the construction industry (Siam city cement and Olympic) and the sugar industry (NY Sugar).

This chapter has presented a broad idea of this thesis. Next chapter, factors that may influence the resources utilisation will be identified and discussed based on a set of literatures reviewing in Chapter 2, which involved references to business marketing, ARA model, decision theory, and information systems.

## **CHAPTER 2**

# **THEORETICAL STANDPOINTS AND CONCEPTUAL FRAMEWORK**

### **2.0 Introduction**

The classical marketing theory, the “marketing mix” or “four Ps” model was introduced in the 1960s (Hakansson *et al.* 2004). This was founded on a basis of traditional economic assumptions of homogeneity and one-directed dependence. Homogeneity assumes that the value of the resources is independent from how they are combined. The one-directed dependence presumes that marketing actors are independent, rational beings, acting toward goals that are absolute and consistent over time, uninfluenced by each other (Hakansson *et al.* 2004). The theory was propounded for a specific purpose to reach an optimal solution for “resource allocation”. In reality, it is, however, more complicated than just reaching optimisation (Hakansson *et al.* 2004). Several issues have been found to contradict the traditional assumptions especially when applied to the B2B context (Snehota 2004). For instance, resource management, resources in B2B is heterogeneous which exchanges and interacted interdependencies of the market actors and it is undeniable in B2B marketing (Hakansson *et al.* 2004: 250).

As introduced in the previous chapter, the emphasis of this research is on MkIS within a B2B context, in particular how the decision makers utilise resources to support decisions. Purpose of this chapter is mainly to present, discuss and develop conceptual frameworks based on a set of literatures. This set of literatures has initially been explored in order to select a model as a basis to for this study starting with a discussion on the theoretical standpoints – choices of network theories and then explanation about the chosen model: Actors-resources-activities (ARA) model in relating to decision-making is further examined. Resources utilisation and marketing decision-making is then illustrated to elaborate possible ways actors would utilise resources in making any decisions based on a sets of organisation decision-making theories. After that, based on buying

decision-making models of Webster and Wind (1972) and Kotler (2001), five groups of factors would affect the resources utilisation; a discussion on the potential influences of these factors is illustrated in section 2.4 in associated with other literatures. Conceptual framework is then drawn based on these discussions. Finally, a conclusion is stated to summarise the key points that emerged from the literature.

## **2.1 Models of network analysis**

Powel *et al.* (1996) found from their research that companies with no tier are becoming increasing rare; most companies have multiple partnerships. Relationships play a major role in marketing practices especially in B2B marketing (Ford 2002; Hakansson *et al.* 1995). Relationships with their partners become a network. Iacobucci *et al.* (1996) state that "networks are extremely important in marketing because so much of marketing is relational, and network methods are important and appropriate tools for studying such structures of interconnections." This statement is applicable not only to business marketing but also to consumer marketing. The locus of B2B marketing practices is relationships which can be found within the networks of inter-organisational relationships that sustain a fluid and evolving community (Powell *et al.* 1996).

This thesis is built on the "Markets-as-Networks" approach on industrial markets (Hakansson *et al.* 2004; Hakansson *et al.* 1995). The underlying argument for applying this approach is that this study is conducting on business markets decisions attention on some specifics characteristics since the settings on B2B markets differ quite substantially from the settings on the B2C. A variety of models of network analysis have been proposed and tested within business marketing and channels contexts (e.g. Ford *et al.* 2002; Hakansson *et al.* 2004; Hakansson *et al.* 2002; Iacobucci *et al.* 1996; Welch *et al.* 2002; Wilkinson 2001) as well as in the field of organisation studies (Powell *et al.* 1996). A model developed by Hakansson and Snehota (1995): the ARA model which provides a forceful framework for the network analysis. It has been chosen as fundamental for this thesis to understand the interactions between actors and resources when they make decisions due to two main reasons. First, while the other models were developed using quantitative approaches (Zolkiewski 2001), the ARA model has been developed and taken in a much more qualitative

approach. For instance, Wasserman and Iacobucci (1986) developed and presented their model in a form of hierarchical log-linear equation<sup>5</sup>; it was built on a set of hypotheses and then tested by a parametric-test. The answers of the equation were thus in quantitative forms in which it may be difficult to give a good and rich explanation of resources utilisation of actors when making decisions. On the other hand, the ARA model was developed in a much more qualitative approach that would give better insights to describe and interpret the interactions in more details. Second, the ARA model would provide an appropriate mechanism for understanding the interactions within a network, especially the interactions between the actors and the resources in this study; yet, the other models did not provide them (Zolkiewski 2001) as the others could not consider three dimensions at once; they were mostly limited to two dimensions at a time: actors and activities, actors and resources, or activities and resources (Iacobucci *et al.* 1996; Iacobucci *et al.* 1986). Whereas the ARA model provides a mechanism to take all three dimensions: actors, resources, and activities and consider them all at once; this best suits the majority of this research. Moreover, the model allows resources to perform activities, i.e. transform and transfer activities, which is an important aspect to this study that view resources are the MkIS that could transform, calculate, or manipulate data/information and then provides a set of facts to decision-makers. A further discussion on the ARA model is provided in the following section in relation to the context of this research.

## **2.2 The ARA model and marketing decision-making**

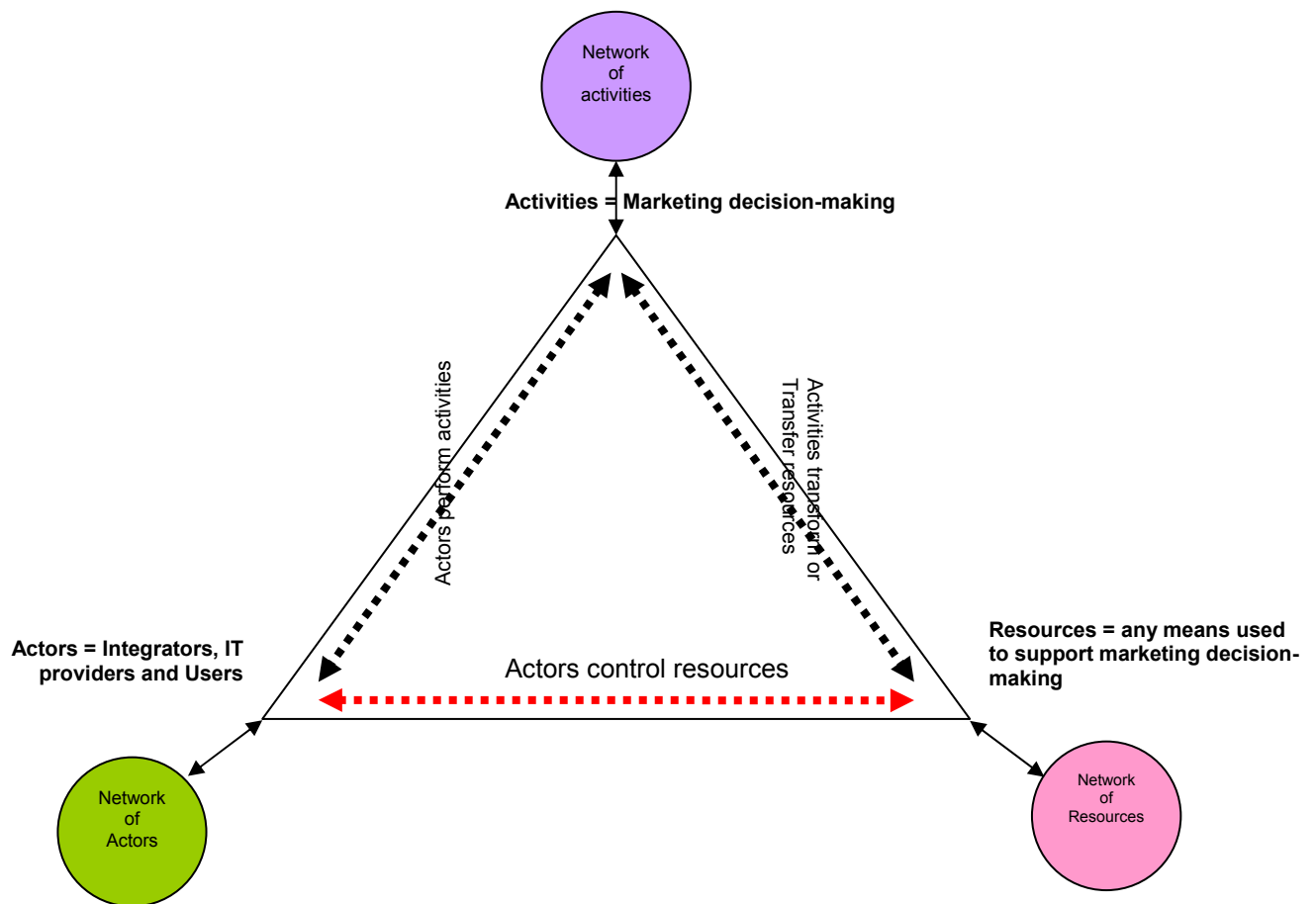
As stated in the prior chapter, in B2B markets, business relationships involve continuity, complexity, symmetry, and informality (Hakansson *et al.* 1995: 7-8). Hakansson and Johansson (2002) also stated that in an industry, the B2B decision-makers deal with both stability and dynamic development at once. For example, in terms of relationships, there is stability as they need to secure and maintain relationships with customers. Dynamic development can be seen in decisions related to product development as an example in which the products need be continuously developed in order to survive in the market and compete with the competitors.

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<sup>5</sup> Details regarding this model can be found in several sources e.g. (Iacobucci *et al.* 1996; Iacobucci & Wasserman 1986)

The ARA model has been developed to “make possible an integrated analysis of stability and development in industry” and to “provide a basis for studies of the roles of actors and sets of actors in industrial development processes, given the relation between industrial stability and development” (Hakansson *et al.* 2002: 145). Three layers are involved in the ARA model as its name suggests: actors, resources, and activities. Activities are performed by actors and when actors perform activities, they use (change or exchange) resources i.e. they have access to or control over various resources. This research focuses on the interactions between two layers: the actors and the resources in performing an activity. The interesting actors are B2B marketing decision-makers, the resources are the existing MkIS both internally and externally in the forms of human, physical facilities and information systems, and the activities are marketing decision-making and its related occurrences. Figure 2.1 illustrates the ARA characteristics and its effects on resources utilisation of decision-makers. This will be then explained in more detail, starting with actors, resources, and activities in section 2.2.1, 2.2.2 and 2.2.3 respectively.

**Figure 2.1: Actors-Resources-Activities Model**



Source: Adapted from: Hakansson and Johansson (2002), pp. 145-149.

### 2.2.1 Actors = Decision-makers

Hakansson *et al.* (2002: 145-146) state that actors generally have five general characteristics. First, "they perform and control activities" i.e. they determine what activities they will perform, how they will conduct them, and which resources are to be used when performing them (Hakansson *et al.* 2002: 145). Second, "through exchange process[es] actors develop relationships with each other" that is to say, networks of actors are established during the process of making a decision such as during meetings and chatting (Hakansson *et al.* 2002: 145-146). Third, "actors based their activities on control over resources" (Hakansson *et al.* 2002: 146). In this research, this refers to the decision-makers who would make decisions based on the available resources, over which they may have direct or indirect control. The fourth is "actors are goal oriented" (Hakansson *et al.* 2002: 146). A general goal of actors is to increase their control over the network; this goal will lead them to other goals (Hakansson

*et al.* 2002: 146). For example, if the decision-makers' goal is to reach an optimal solution for a decision, they will have to think where to obtain the decision-support; in other words, they would like to have direct or indirect control over the resources. Finally, the fifth is "actors have differential knowledge about activities, resources and other actors in the network" (Hakansson *et al.* 2002: 146). That is to say, not every decision-maker has similar knowledge about decisions they take, resources available to support the decision-making, or other people's works and/or resources.

Decision-makers could be individuals, groups of individuals, parts of organisations, or the whole organisations. In general, more than one individual is involved in the B2B decision-making process (Quigley *et al.* 1994; Webster *et al.* 1972); that is to say, more than one actor may be involved in a decision. B2B Decision-makers can be classified into three groups: providers, users and integrators based on their interaction with the resources. Providers or resources providers (Hakansson *et al.* 1995) are those who have access and control over resources; they only supply the resources to other actors within their organisation. By this definition, providers is not limited to only IS providers, IS designers (Quigley *et al.* 1994), IS vendors (Daniel, Wilson, & McDonald 2003), but includes other people that provide resources (e.g. facts, decision-supports, IS) use to generate decision-supports. Users are those who only make use of the resources to support their decisions (Hakansson *et al.* 1995). The third group, is a result from the pilot study, and are decision-makers that to some extent play both roles. The term, Integrators, is used in reference to these actors in order to give the sense of integration or integrated. It refers to an individual or organisation that builds systems from a variety of diverse components. Hence, in this research, integrators are those who provide resources as well as utilise them to support their decisions. Based on these definitions, a linear line could be drawn ranging from providers, integrators and users. Bonds between each group could be simply drawn as users utilise resources provided by providers and integrators, and providers provide resources to users and integrators. In this research, an actor could not be user, provider or integrator at the same time. S/he could play a distinct role when engaged in different decisions.



Actors usually have very different roles, status, and personal backgrounds, which generate personal related factors that may lead different ways of resources utilisation. For example, skill and experience were found to have a significant effect on organisational decision-making in several studies (Ashill *et al.* 1999; e.g. Ashill *et al.* 2001; Kotler 2001). Experience improves decision-makers' skills and allows them to develop better detailed and more comprehensive knowledge of their customers, competitors, suppliers, marketing situations and market opportunities (Ashill *et al.* 1999: 525-6). Additionally, higher skills or greater experience boosts the individuals' ability to draw on better potential behaviour in dealing with a situation (Ashill *et al.* 1999: 525). Higher skilled or more experienced decision-makers are likely to be better at knowing what actual decision-support they require. On the other hand, lower skilled or less experienced decision-makers may not know what they actually need to support their decision-making. The latter, therefore, may employ the existing resources in different ways from the former. Alternatively, the latter may decide to imitate the former. Individual factors, therefore, play a significant part in what influences the decision-making process. Each group may have a person who influences the others, and the decisions may be affected by personal and interpersonal factors. In addition, individual factors such as education, job position, and culture (Kotler 2001: 222) may shape the decision-making process of the individuals.

As discussed before, actors perform activities, but they may or may not control resources, i.e., they may have no direct access to some resources (Hakansson *et al.* 2002: 145). It is time to consider how they would act in order to gain access to the resources. According to the ARA model, actors may gain access via their networks or actor bond (Hakansson *et al.* 1995). For instance, they may contact the one who has control over the resources such as supervisors, friends, or colleagues, and then ask for permission to access to the resources, or ask for the decision-support they require. This is where interpersonal related factors may influence the ways the actors utilise resources. The interpersonal related factors include interests, authority, status, empathy, and persuasiveness (Kotler 2001: 222).

### **2.2.2 Resources: MkIS**

Performing activities requires resources; making decisions demands decision-support. Each type of activity entails different kinds of resources (Baraldi 2003: 5; Hakansson *et al.* 2002: 148). Transformation activities require transformation resources; transfer activities require transfer resources. Decision-support is a resource that is transformed and/or transferred from initial data to support the decision-making. Actors, either a single actor or several joint actors, have direct or indirect control over all the resources. Both types of resources are heterogeneous and mutually dependent on each other. Heterogeneous resources means that their attributes have an unlimited number of dimensions i.e. there is always a further way of utilising the resources in different ways or different settings (Hakansson *et al.* 2002: 147-148). Mutually dependent refers to the use and the value of a specific resource including IT tools. This depends on how they are combined with other resources (Baraldi 2003). Resources are linked to each other by means of activities that change or are exchanged with them. (Hakansson *et al.* 1995)

Resources in focus are MkIS. It has a heterogeneity property as well as mutually dependent. Heterogeneity as various actors could have a different view about the elements of MkIS existing in the organisations. For example, some actors may see a particular database as an element of their MkIS, but the other actors may say it is irrelevant. Mutually dependent on each other as data available in MkIS can be combined to create a value and use in many ways depend on the decision-makers. MkIS is one or more information system(s) that include people, equipment, and procedures used to collect, store, analyse, and generate marketing decision-support (e.g. Assmus 1977; Cox *et al.* 1967; Kotler 2001; Sisodia 1992). MkIS is initially developed to be a system to support marketing management in its decision-making. It however is extended to be an essential tool for the entire marketing organisation (Talvinen 1995) decision-making.

Based on the definition above, many IS and/or IT tools available nowadays can be accounted in MkIS, for example, ERP (Noori & Salimi 2005), CRM (Michel, Naude, Salle, & Valla 2003), Decision support system (DSS) or

marketing decision support system (MDSS) (Daniel *et al.* 2003; Hogue 1990; Noori *et al.* 2005; Talvinen 1995) as well as people within and outside the organisations, and other facilities such as calculators, computers, and stationery (Jennings 1998: 274-275). Hence, resources in this research can be classified into three groups: people or human, IT tools, and physical facilities.

**IS and/or IT tools** mostly play the role of resources (Baraldi 2003). It is one of the most important resources in organisations (Baraldi 2003). They are used in almost every sector to support business activities. In B2B, inter-organisational systems (IOS) have been developed alongside computer technology to enhance communications and improve business processes within the supply chain (SC) (Archer & Yuan 2000). The IOS is built around information technology, computer and communications technology that facilitates the creation, storage, transformation and transmission of information (Wilson & Vlosky 1998). It differs from an internal distributed information system by allowing information to be sent across organisational boundaries. The IOS is, for example, Electronic Data Interchange (EDI), bar-coding for inventory management and control, and Universal Product Code (UPC), bar-coding to support new approaches to managing product flow based on Just-In-Time (JIT), Quick Response (QR), and other logistics strategies. These technologies have been adopted in many organisations to support decision-making mainly with regard to the production function; yet they also utilise them in the other areas especially in marketing. There are also other IT tools implemented in other functions in an organisation.

Although the terms 'MkIS' was one of the early information systems installed to support marketing decision-making (Cox *et al.* 1967). Marketing intelligence systems is followed with purposes that are more specific. Now the recent focus is shifted toward customer relationship management (CRM) (Krol 2003; Michel *et al.* 2003). Apart from the functional systems, there are also other information systems that have been developed to tie entire organisations' resources together, such as Enterprise Resource Planning (ERP). These systems could be accounted as a part of MkIS based on the definition above.

They, however, seem to attempt to tie the resources together, and then feed decision-support to the decision-makers which results in several critical issues: information overload (Fletcher 1990), insufficient decision-support, or inaccurate decision-support (Malhotra *et al.* 2003). This issue may influence decision-makers to utilise the resources in different ways. Different information systems provide different types of decision-support depending on their capabilities, which are designed and controlled by the providers e.g. system designers or system developers.

**Humans and their relationships:** Individuals, either internal or external, could be counted as resources (Baraldi 2003; Ford *et al.* 2002; Hakansson *et al.* 2002; Hakansson *et al.* 1995), if they are not involved in the decisions. An individual can be a resource for one activity, and an actor in another. For example, a salesperson who is dealing with a customer has to make decisions on what price s/he will offer. S/he would like to obtain information about the customer, but s/he does not have it. S/he, however, knows that one of his/her colleagues used to work with this customer. S/he, then, goes and talks to this colleague to obtain the necessary information. In this case, his/her colleague is one of the resources for this particular decision. On the other hand, his/her colleague could also be an actor, if s/he performs activities to obtain the information.

**Physical facilities:** Physical facilities include all tangible facilities such as capitals, products and any other hardware (e.g. computers, calculators or paper), which the decision-makers could possibly employ to generate decision-support. Jennings (1998: 275-276) suggested that physical resources for marketing function include location of sales offices and warehouses, as well as accommodation.

These resources are the basis for superior current performance of the organisation. The key resources create competitive advantages for the organisation, which enables the organisation to maintain and develop its keys resources (Jennings 1998: 279). In this study, MkIS are the key resources, however to what extent organisations can gain advantages over its competitors depend on how the decision-makers combine and/or utilise the resources to support their decisions. Organisations may also further develop MkIS to provide more support to the decision-makers, for example,

implement a new CRM application to assist decision-makers with the development of customer retention programs.

### **2.2.3 Activities = B2B marketing decision-making**

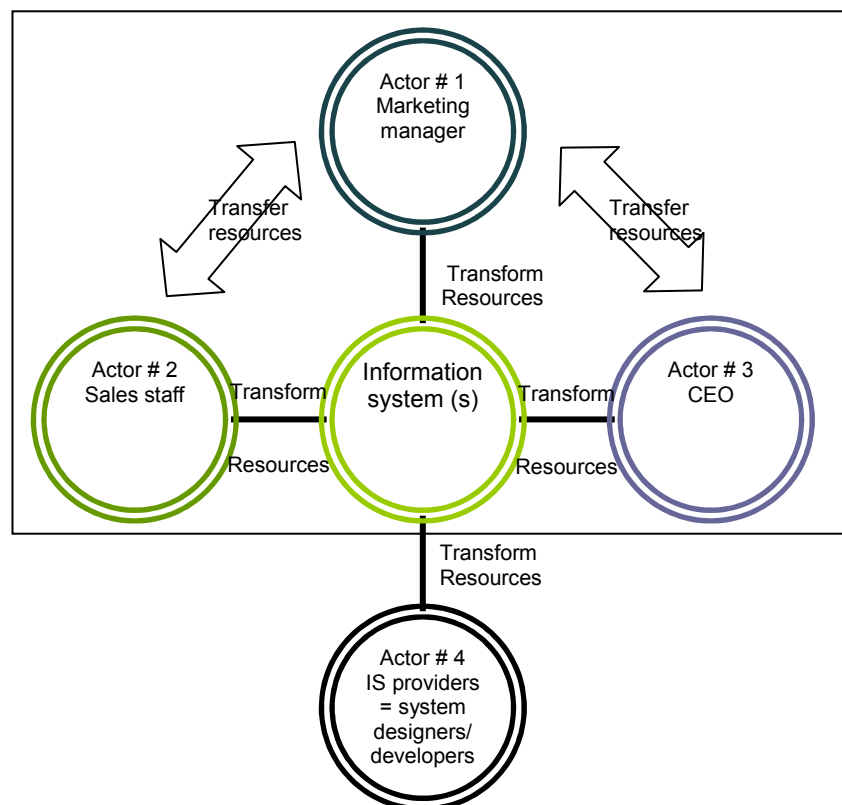
An activity generally occurs when one or several actors combine, develop, exchange, or create resources by utilising other resources (Hakansson *et al.* 2002: 147). Such an activity is divided into transformation activities and transfer activities (Hakansson *et al.* 2002: 147). With transformation activities, resources are changed in some way where at least an actor has direct control them. Transfer activities transfer direct control over a resource from one actor to another. Transformation activities performed by different actors are linked to each other by transfer activities. The latter have never been controlled by a sole actor (Hakansson *et al.* 2002: 147). The transfer activities influence and are affected by bonds between the actors involved. Many activities occur in an organisation everyday; marketing activities are vital for companies. Daniel *et al.* (2003) asked managers to defined marketing activities when they conducted research to develop a map of marketing information systems, and the managers defined marketing activities as all activities that related to understanding and satisfying customer needs, including some of the activities that sat in departments other than those termed marketing or sales. Based on this definition, decision-making, particularly marketing decision-making is one of the main marketing activities that managers perform. Hence, marketing decision-making and its occurrences are the focal activities in this study. Other activities are beyond the range of this study.

It is time to consider the meaning of marketing decision-making. Consider that Moorhead and Griffin (1998: 410) defined 'decision-making' as a process of choosing from among several alternatives. Thus, marketing decision-making is the process that decision-makers choose one choice from two or more alternatives when perform marketing activities. A sole choice is not considered to be a problem (Bazerman 2001: 2-3; Matsatsinis *et al.* 2003a: 3-4). In general, decision-making can be classified into two types: programmed and non-programmed decisions, based on frequency and information conditions (Moorhead & Griffin 1998: 410; Simon 1960). Frequency represents how often a particular decision recurs and information conditions describe how much information is available about

the likelihood of various outcomes (Moorhead *et al.* 1998; Simon 1960). From now onward, the term 'decision-making' will be used in refer to marketing decision-making as it is the focus of the study.

It is not only actors who can perform activities. Nowadays, with advanced information technology, new resources can be automatically created and/or combined by software applications i.e. resources, as well as actors, can perform activities. The actors, however, are still the only ones who have control over the resources. The software applications are still programmed and controlled by actors namely IS providers (e.g. system designers or system developers), who may not be directly involved with the decision-making. They, however, have control over the resources, and exercise their power over activities, which may affect the ways the decision-makers utilise their resources and obtain the required decision-support. Figure 2.2 demonstrates the activities' cycle in making a decision<sup>6</sup>.

**Figure 2.2: Activities cycle in making a decision**



<sup>6</sup> Based on my readings of several books and journals e.g. Understanding Business Marketing and Purchasing: An interaction approach by Hakansson et al. (2002) and The Business Marketing Course: Managing in Complex Networks by David Ford (2002).

### 2.3 Decision-making and Resources utilisation

Assmus (1977: 272) stated that every decision devolves from a decision model based on a certain decision-making theory. Many researchers have studied this area and a large number of theories exist (e.g. Christensen 2003; Gibbons 2003; Miller *et al.* 1997). Decision-making theories vary from 'coherence' to 'chaos, rational decision-making to a garbage can model (Miller *et al.* 1997). Rational and boundary rational decision-making theories are examples of the coherence (Miller *et al.* 1997: 304). The rational approach assumes that decision-makers follow a systematic, step-by-step process and organisation is economically based and managed by decision-makers who are entirely objective and have complete information (Moorhead *et al.* 1998). It also assumes that individuals process information and arrive at a decision in a similar manner (Leonard *et al.* 1999). This approach is appealing because of its logic and economy; it however raises questions as the actual decision-making often is not a wholly rational process (Moorhead *et al.* 1998: 418). It however, overlooks individual decision-makers' characteristics as well as disregards actual decision-making processes and how differences of each individual affect that process (Leonard *et al.* 1999). This results in the development of the behavioural approach, sometimes called boundary rational approach (Miller *et al.* 1997; Moorhead *et al.* 1998). This approach attempts to account for the limits of rational decision-making by acknowledging the role and importance of human behaviour in the decision-making process. A critical assumption of this approach is that decision-makers operate with bounded rationality rather than the perfect rationality (Moorhead *et al.* 1998). Bounded rationality is the idea that although individuals seek the best solutions and choosing a single best solution are beyond the capabilities of most decision-makers; they therefore accept less than ideal solutions based on a process that is neither exhaustive nor entirely rational (Moorhead *et al.* 1998). Based on this coherence view, decision-making processes are "relatively sequenced, linear and reflect attempts by decision-makers to achieve step-by-step progress toward stated goals and objectives" (Miller *et al.* 1997: 304).

On the contrary, in the chaotic view, the decision-making process does not necessarily have to be linear, sequenced, or intended rationally. This is in

line with the garbage can model developed by Cohen *et al.* (1972). They “believe[s] solutions are generated prior to processes and attached to problems in a random fashion” (Miller *et al.* 1997: 305). The model is developed under the consideration of organised anarchy with three general properties: problematic preferences, unclear technology, and fluid participation. *Problematic preferences* mean that it is difficult to impute a set of preferences to the decision situation that satisfied the standard consistency (Cohen *et al.* 1972; Takahashi 1997). The organisation operates on the basis of a variety of inconsistent and ill-defined preferences i.e. loose collections of ideas (Cohen *et al.* 1972; Takahashi 1997). *Unclear technology*, organisation operates on the basis of simple trial-and-error procedures, the residue of learning from the accidents of the past experience, and pragmatic inventions of necessity (Cohen *et al.* 1972; Takahashi 1997). *Fluid participation* means that boundaries of the organisation are uncertain and changing; the audiences and decision-makers for any particular types of choice change unpredictably (Cohen *et al.* 1972; Takahashi 1997).

Moorhead and Griffin (1998: 419) suggest that in practice; decision-makers use hybrids of these approaches to make the tough day-to-day decisions in running organisations. Discrete decisions that start and stop over a period (Miller *et al.* 1997) may be a good example of the hybrid of the coherent and the chaotic approaches. It may start with the structured, methodological process of gathering information; it may however end up with less structure as it has uncertainty involved. Some decision-makers use a methodological process of gathering all available information, developing and evaluating alternatives, and then seeking advice from acknowledgeable persons before making a decision. Others fly from one decision to another, making seemingly hasty decisions and barking out orders to subordinates. The latter would seem to not use much information or a rational approach to making decisions. However, Eisenhardt (1989b) found that managers who make decisions very quickly probably are using just as much, or more, information and generating and evaluating as many as slower and more methodical decision-makers.

Based on the decision-making theories discussed above, transformation and transfer activities are incurred in any decision-making processes



because a complete activity cycle has always contained both of them (Hakansson *et al.* 2002: 147). For example, to make a decision, the involved decision-makers have control over different resources, which may or may not overlap. The decision-makers may start by exercising their direct control over resources to generate the required decision-support, which is a transformation activity. If this is insufficient, they may then attempt to seek resources from other actors by sharing information over meetings, or asking permission to access the resources, which are transfer activities. Every decision-maker, therefore, may make decisions based on the decision-support obtained from their exercises. Networks of activities may influence the ways in which decision-makers utilise resources through both direct and indirect control.

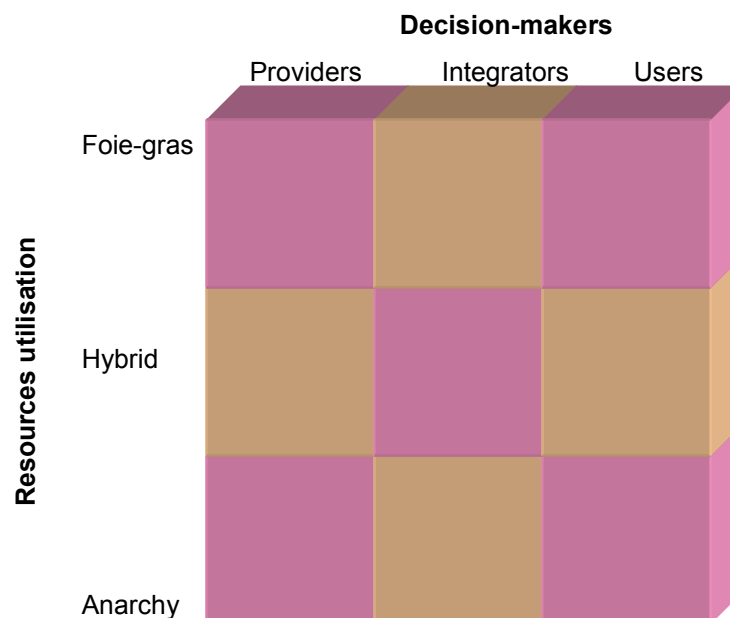
Now it is time to consider how the actors may utilise each type of resource and what factors may influence this utilisation. Actors, decision-makers, are the ones who decide which way the resources will be combined and utilised to support the decisions. The actors may employ different ways of making different decisions. In line with the two views of decision-making processes; two tremendous ways decision-makers may utilise the resources, namely, *foie-gras* and *anarchy*.

*Foie-gras* could be seen as a way decision-makers utilise resources when they take a coherent view; sequenced, linear and reflective attempts by decision-makers to achieve step-by-step progress. With this view, decision-makers are forced-fed with information from the organisation as they believe that the individuals would process information and make decisions using a similar manner. The providers may then develop MkIS that feed information to the decision-makers to ensure that they will have sufficient decision-supports to make best decisions on time. The users may use decision-supports given by the systems without any doubt. The integrators may also perform similarly with the providers and the users. It however may result in information overload as decision-makers may not be able to digest the information and then they may start to ignore the information force-fed from the system and use other sources to support their decision-making.

On the other hand, *anarchy* resources utilisation could be seen when decision-makers make decisions with the chaotic view: does not necessarily have to be linear, sequenced, or intended rationally. It could be relatively unstructured. With this view, providers may provide alternatives of resources for integrators and users to choose by themselves. Users may choose to combine resources to generate decision-supports based on their interpretation of the decisions i.e. each decision-maker will have their own ways of combine resources to generate decision-supports and create value from the resources.

Otherwise, they may settle on a way which lies somewhere in between the two extremes. In an organisation, many times decision-makers take different views which may incur problems within the organisation. Tension between the three groups of actors with different views when they utilise the resources to support their decisions is vital for managing organisations. Thus, the middle of the conceptual framework is drawn on two axes: decision-makers and resources utilisation as illustrated in figure 2.3.

**Figure 2.3: Resources utilisation and decision-makers**



Individuals in an organisation make take different views of decision-making that results in different ways of utilising the resources. Various factors may influence individuals to take a different view, which may also affect their resources utilisation; a discussion on what factors could have been influencing the resources utilisation is illustrated in the following section.

## **2.4 Factors affecting resources utilisation**

Based on the Webster and Wind's (1972) general model for understanding organisational buying behaviour, four groups of factors are suggested to influence the ways the decision-makers utilise the resources in supporting decisions. These four groups are the individual factors, the buying centre, organisational factors, and environmental factors. Note that, this model was developed with emphasis initially on B2B factors; however, the other factors are also important subjects. Similarly stated in the classic marketing management textbooks written by Phillip Kotler (2001), He suggested that major influences on industrial buying behaviour are individual, interpersonal, organisational and environmental factors (Kotler 2001: 221-227). These factors would also influence the resources utilisation of the decision-makers in B2B organisations. However, it is a fact that a B2B organisation has its unique characteristics, which could also create an effect on the way actors utilise the resources. Thus, B2B related factors are added to the model to encompass this fact. Further from the readings, there are some other factors such as types (Miller *et al.* 1997; Moorhead *et al.* 1998: 410; Simon 1960), levels (Parkinson 1994) and priority (Piercy & Evans 1999) of each decision that could also possibly have an influence on the resources utilisation. Hence, the factors that could possibly influence the ways the decision-makers utilise the resources are divided into: personal and interpersonal related factors, organisational related factors, marketing related factors and other related factors.

### **2.4.1 Personal and interpersonal related factors**

Although in B2B markets, making a decision may involve more than one person (unlike in B2C) (Webster *et al.* 1972), personal factors play a significant role in influencing the decision-making process as well as their resources utilisation. Each group of actors may have a person who influences others, and decisions may be affected by personal and interpersonal factors of each actor. Personal - or individual – related

factors are *personal characteristics* including the actor's age, income, education, job position, personality, attitude toward risk, experience, as well as culture (Kotler 2001: 190-195).

Webster *et al.* (1972) assert in their research that in order to understand interpersonal interactions within buying centres (actors), three aspects of role performance needs to be considered: role expectation, role behaviour, and role relationship. These three aspects could alter decision-making processes and resources utilisation of each actor. Webster *et al.* (1972) divided interpersonal related factors into two groups: task and non-task related. Nonetheless, these two groups are influenced by similar types of influencers, which are technological constraints, group structure, groups' tasks, member characteristics, goals, as well as leadership. Kotler (2001: 222) states that interpersonal related factors include interests, authority, status, empathy and persuasiveness.

These personal and interpersonal characteristics resulted in different buying styles e.g. "keep-it-simple" buyers, "own-expert" buyers, "want-the best" buyers, and "want everything-done" buyers (Kotler 2001: 226). Style of decision-making is one of the personal related factors, which may affect the utilisation of resources. Although, rational decision models of decision-making often ignore individual decision-maker characteristics; assume that individuals process information, and arrive at a decision in a similar manner (Hambrick 1987) Decision-making behaviour, however, is actually characterised by differences in many areas, including the number of criteria used, the type of information search which is undertaken, the sources of information used, the use of heuristics, and the number of alternatives generated (Eisenhardt 1991). An individual's characteristics are often linked to different decision-making behaviour, that is, the way the decision-maker processes information in terms of gathering, analysing, and interpreting the information obtained (Leonard *et al.* 1999: 410). Decision-making style refers to the ways in which a decision-maker views and thinks about situations (Leonard *et al.* 1999: 410). Each style involves a different perception of information acquisition and processing (Leonard *et al.* 1999: 410-411) that may form a different way of resources utilisation. As discussed in section 2.1.1, the experience of an individual plays a critical role in shaping the way the individual utilises the resources they control.

Moreover, actors' problem solving style may affect the way they utilise the resources. In some circumstances, decisions are made in order to solve particular problems. Different problem-solving styles result in different 'facts' being needed (Piercy *et al.* 1994). Based on the suggestions of Mason and Mitroff (1973) and Piercy *et al.* (1994: 393-4), there are four different problem-solving styles of marketing decision-makers. First, sensation thinkers are those who "follow the system and want the organisation to be run on facts. They follow rules and manage many details and facts" (Piercy *et al.* 1994: 393). They tend to base their decisions upon 'facts' and rules. They prefer routines and standardised ways of working. These individuals are 'detail people'; they need many decision-supports. Second, intuitive thinkers are those who are "interested in principles and hypothesised relationships and are more interested in designing things than running them, and need support from others in details and 'facts'". They are more oriented towards new problems and political coalitions" (Piercy *et al.* 1994: 393-4). They are likely to be more creative, and they may need support from others in details. Third, sensation feelers are those who "prefer unstructured situations, loosely coupled organisations and few rules or rigid systems" (Piercy *et al.* 1994: 394). They are pragmatists who deal with situations in a methodological manner and prefer few precise rules. They make decisions based on data available on hand rather than instincts. Fourth, intuitive feelers are "pragmatists who deal with problems in a methodological fashion and prefer well-defined rules and decisions based on 'facts' rather than hunches" (Piercy *et al.* 1994: 394). They prefer unstructured situations, loose organisation with few well defined rules. An actor may have different problem solving styles, which may result in different ways of utilising the resources in order to make a decision.

Hence, these factors may shape each individual's decision-making process as well as influence the way they utilise resources to support their decisions. An actor could play several roles in an organisation; however, in dealing with a certain decision, s/he would act only one role: provider, integrator, or user.

### **2.4.2 Organisational related factors**

The organisational climate shapes decision-makers' actions in a way that is different from if they were working alone or in another organisation (Webster *et al.* 1972: 14). Individual decision-makers are directed and motivated by those climates, which include organisational structures, organisational cultures, organisational technology, organisational goals and tasks, organisational actors (Webster *et al.* 1972: 14-16), as well as organisational relationships (Piercy 1979: 267-8).

*Organisational structures* comprise communication, authority, status, rewards and work flow (Webster *et al.* 1972: 16). It could also be classified according to the number of authorisation levels - as hierarchical and flat organisations, or sometimes it is divided into centralised and decentralised power based on empowerment of the authority (Ford 2002: 85; Lye 1998: 101-6). In this research, it will be classified according to Burn and Stalker (1961); they divide organisations into 'mechanic' and 'organic'. Mechanic organisations have rigidly prescribed organisational structures with well-defined tasks and methods, duties and powers throughout the organisational hierarchy. Organic firms have a more flexible structure; continual adjustment and redefinition of tasks are more common, and is more suited to a network rather than hierarchy.

Buttery and BATTERY (1991: 28) stated that different organisational structures results in different limits and scopes of decisions. In mechanic organisations, decision-makers or the users know their scope of work precisely, so they should have no doubt, of what decision-support they need. In contrast, in organic organisations, their roles continually change; they may encounter various challenges, and they need decision-support, but possibly lack ideas of what they may need. Moreover, decision-makers who work in organic firms may be more flexible in gathering decision-support, while the ones who work in mechanic organisations may be subject to restrictions (Hulbert, Farley, & Howard 1972: 36). Those who work in organic firms may acquire decision-support from many different sources (Hulbert *et al.* 1972: 36). The decision-makers, therefore, may utilise resources in diverse ways.

Besides this, providers' perception of an organisational structure also affects their design and developments (Walsham 1993: 29-31). If the providers see organisation as a mechanic, they may “create rigid and inflexible systems”, which are inappropriate to the need for adaptation to changing circumstances (Walsham 1993: 30). In contrast, the organic approach views organisations as open systems that need to satisfy internal requirements and adapt to environmental circumstances. The providers may design or develop flexible systems that allow users to change according to the situations. These two structures have their own advantages and disadvantages. Different structures would alter the way actors utilise their resources to support their decisions.

*Organisational technology* can be defined as the management and information systems that are involved in the decision-making process including computers, databases, software packages and analysis models (Webster, Jr. *et al.* 1972: 17). Since different technologies give different results, the requirements of the decision-makers will change. For example, different software packages (e.g. ERP, CRM) from different companies provide dissimilar sets of decision-support to decision-makers. Different organisational technologies, therefore, may result in various combinations of resources utilisation. Organisational technology is classified into three categories according to the levels of computer technology employed in the organisations.

- *Basic* organisational technology refers to organisations that may or may not have computers. It may be used in managing transactions with customers (Parkinson 1994: 363). With no or some computer technology, decision-makers may have to dip into data storage themselves.
- *Intermediate* organisational technology refers to those organisations which have some databases and software packages that are able to conduct marketing profiling and targeting, and develop effective marketing directing (Parkinson 1994: 363). Decision-makers may be forced to accept a certain form of decision-support, but may also need to gather some other support themselves.
- *Advanced* organisational technology refers to those organisations that have complete software packages and database systems. These technologies allow an organisation to produce a strategic plan,

marketing model, and marketing productivity (Parkinson 1994: 363). Software packages or applications are likely to force feed decision-support on the decision-makers.

*Organisational relationships* are concerned with interaction among people in the organisation. The relationships will shape information flow as well as the ways in which information will be used and perceived (Piercy 1979: 267). Organisational relationships are results of conflicts of interest, status, trust, and recognition among organisational members. If the departments are in conflict and disagreement over goal-directed actions, then there are areas where the information flow may be reduced, distorted or discontinued (Piercy 1979: 268). The input of the information system may then be inaccurate, and decision-makers may need to manipulate or find their own decision-supports. It could also result in different ways of handling information of the decision-makers. Trust is another influencer that attracted many researchers in the B2B context especially the ones who conduct their study on a relationship perspective (Bennett & Gabriel 2001; de Ruyter, Moorman, & Lemmink 2001; Elahee & Brooks 2004; Handfield & Bechtel 2002; Huemer 2004; Payton & Zahay 2005; Svensson 2004). Relationships within organisation, therefore, are one of the noteworthy factors that may shape the resource utilisation of the decision-makers.

#### **2.4.3 Marketing related factors**

Webster *et al.* (1972) and Kotler (2001: 222) named these groups of factors as environmental factors. In order to give the sense of marketing involvement in these factors, this group was named marketing related factors. These marketing related factors influence the information flow into the organisation, especially, the flow of marketing communications from potential suppliers, through the mass media, and through other personal and impersonal channels (Webster *et al.* 1972). Within a B2B context, marketing related factors can be classified into two groups: B2B related factors, and macro-environmental related factors. B2B related factors are the environmental factors that influence only B2B markets as a result of B2B unique characteristics. Macro-environmental factors are general environmental factors that influence both B2B and B2C markets. These factors are influenced the buying decisions of the actors (Kotler 2001: 222;



Webster *et al.* 1972), therefore, they could also affect the way the actors utilise resources.

#### **2.4.3.1 Business-to-Business (B2B) related factors**

B2B marketing has unique characteristics; the nature of the decisions varies according to these traits (Ghingold & Wilson 1998). They can be summarised as six unique aspects, which generally determine the different nature of decisions, information acquisition, and decision-making processes in B2B organisations, which are: fewer but larger buyers (Dwyer & Tanner 2001: 8; Kotler 2001: 216), supplier-customer relationships (Dwyer *et al.* 2001:8; Ford 2002: 8; Kotler 2001: 216), derived demand (Kotler 2001: 216), professional purchasing (Kotler 2001: 217), and multiple sale calls or “Multi-person process” (Ghingold *et al.* 1998; Kotler 2001: 218). These six aspects resulted in five factors that may influence the actors' resource utilisation.

*Number and value of customers* is important because B2B organisations normally have a lower number of customers compared to B2C (i.e. fewer but larger buyers) (Hakansson *et al.* 1995). Within the number of customers, however, the value might be different (Dwyer *et al.* 2001: 8). Ford (2002: 5) also suggested that some customers could be individually important to a supplier if they are responsible for a significant proportion of its total sales. Suppliers can also be individually important to a customer in the same way. If a customer has a higher value or power to the company, it will have a big influence regardless of the company's decision-making (Ford 2002: 5). The number and value of customers contribute to customers' power as regards decision-making. The nature of the decisions changes according to the power of customers; decision-makers may utilise their resources in a different manner when making decisions related to different customers. Each customer has different value to the company, their powers are thus distinct. High value customers would have a higher power to influence the decisions. Higher value customers could influence nature of decision-making because they are more important for the vitality of the organisation. In making a decision regarding the *high-value customers or high power customers*, decision-support may be gathered with more careful and be highly detailed. On the other hands, low value customers have less power to influence the decisions, when dealing with

decisions regarding the *low-value customers or less power customers* the decision-supports required would be different, and the actors may utilise only available resources to support their decisions.

*Supplier-customer relationships* are the types of relationships that will be considered in terms of how well an organisation has integrated its customers and suppliers. There are four linkages that B2B organisations may employ to integrate themselves into their environment (Berthon *et al.* 2003; Michel *et al.* 2003).

- Auction exchanges or stand-alone refer to organisations that are not linked to others. Suppliers and customers are not integrated; information of suppliers and customers is not shared. In this case, when making decisions, the decision-makers may need to gather data or information from various sources e.g. customers, suppliers, competitors to support their decision-making. It could be done on an ad-hoc basis as information they have could be easily outdated due to the fact that they do not linked with any of the customers and suppliers.
- Catalogue, hub, and spoke refer to those who are not really integrated into the environment, but gather decision-support from a centre. The decision-support will flow in and out through the intermediary or the centre. In this case, decision-makers may be able to acquire some support from the intermediary, but they may not obtain all they require. They, therefore, may need to find other support from other sources.
- Collaborative networks or alliances occur when the organisations, customers, and suppliers are integrated and linked as a network. Information flows in and out from all supply chain members. They may be integrated by using an inter-organisational system such as the Internet, extranets, and EDI. Decision-makers may consume decision-support given by these applications
- Hierarchies or value chains: these are integrated in a linear chain. Suppliers are linked with an organisation and the organisation is linked to customers, but the suppliers are not linked with customers. Information or 'facts' from both suppliers and customers flow in and out.

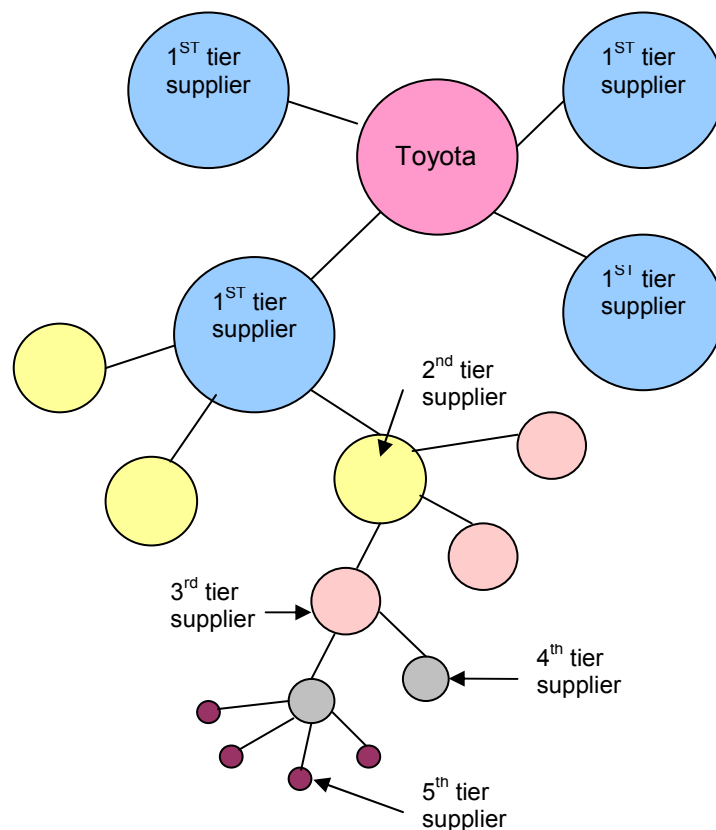
Relationships seem to be more complicated. In an organisation, more than one type of relationship may occur; information acquisition and data processing may vary according to the type of relationships.

*Nature of demand* includes the fact that decision-makers may not need to understand the total demand for the market. However, derived demand is an important point that needs to be understood. Demand for B2B products or services is generally derived from the demand for their customers' products or services, not from individuals' needs or wants (Haas 1976: 21). The customers' demand is however influenced by end-users needs or wants. Yet, there are some certain industrial products or services where the demand is not really related to individual end-users. Hence, the demand for B2B products or services can be derived from either end-users or just customers (Kotler 2001: 216) depending on the types of products the company offers. Haas (1976: 26-29) classified products into six types: heavy equipment, light equipment, component parts, processed materials, consumable supplies, and raw materials. Each type of product has a different nature of demand.

In companies that offer heavy equipment, light equipment, processed material and consumable supplies, end users' needs, or wants may not affect the demand for B2B products or services because the end-users consume the final products; they may not be interested in how it has been processed. For example, demand for tyres for an aeroplane was not derived from airline customers due to the fact that it is not one of their interests. The demand for the braking system is solely derived from Boeing Company or Airbus. In contrast, both customers and end-users demands could influence the component parts and raw materials' demand because the end-users are interested in what they actually obtain when they purchase. In this case, the decision-makers may need decision-supports about the end-users as well as the customers. If the demand is derived from both customers and end-users, decisions need to be made based on resources from both parties. Gathering decision-support related to the customers may not be difficult; the company may integrate with customers in exchange for information. However, end users' needs and wants may be more difficult to gather.

*Type of networks means that* companies can be seen as suppliers, distributors, or customers in any network. Two distinct types of networks are supplier and distributor networks (Ford *et al.* 2002: 30-35). A supplier network is used for managing a large number of suppliers. Toyota is a typical example of a company that is dominated by a supplier network (See figure 2.4). A supplier network has four significant features: indirect relationships, co-ordination between relationships, the influence of large companies, and problems with single perspectives (Ford *et al.* 2002: 30-32). Customers have to ensure that all relationships in the network are working effectively in order to gain substantial value. With this type of network, the customer plays a significant role in the overall development of the network. The integration among the supply chain members is well developed in perhaps a linear way. The decision-makers may be able to access and gather all required decision-support.

**Figure 2.4: Toyota's supply network**

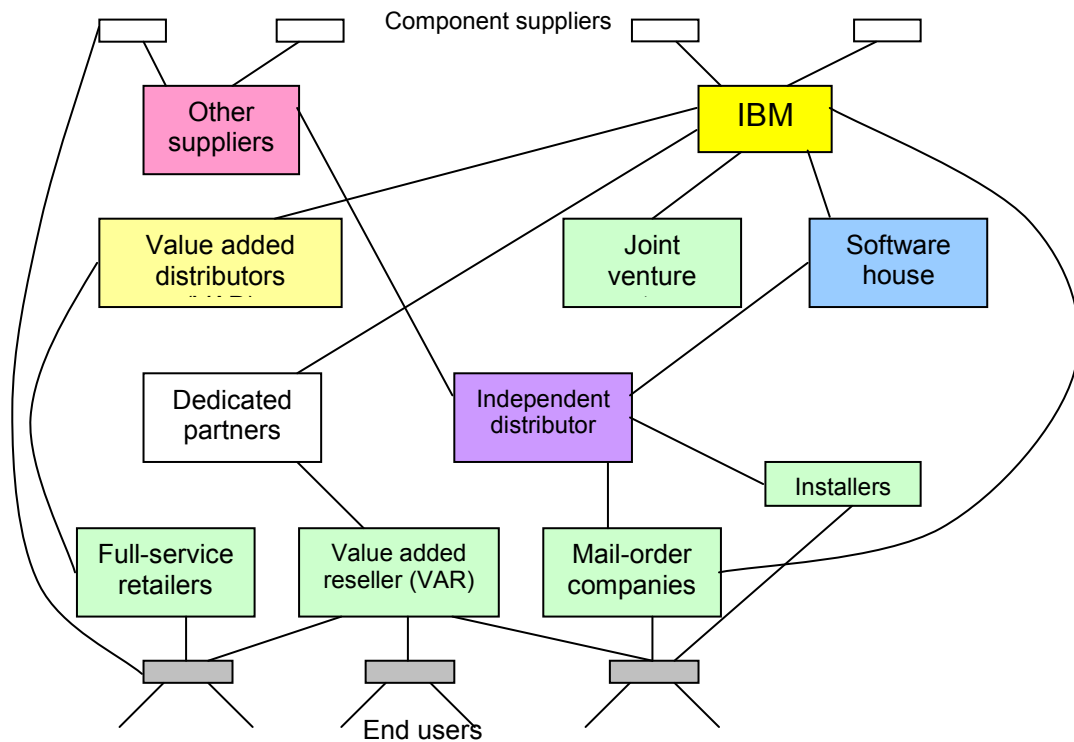


Source: Ford, Berthon, Brown, Gadde, Hakansson, Naude, Ritter, & Snehota 2002 p. 32

In a distributor network, a company may use many channels to distribute their products to end-users; IBM is one example. Figure 2.5 shows the

distribution network of IBM. Three distinct features of the distributor network are the variety of companies, variety of relationships, and difficulties of control (Ford *et al.* 2002: 32-33). In this type of network, the variety of companies and relationships creates difficulties in accessing and gathering 'facts' to support the decision-making. Decision-makers may have to create their own support by using an anarchy vision. However, while both types of network can occur in a company, only one will dominate.

**Figure 2.5: IBM's distribution network**



Source: Ford *et al.* 2002 p. 32

#### **2.4.3.2 Macro-environmental factors**

The Macro-environment is another factor that generates uncertainties in making decisions (Ashill *et al.* 2001; Ford 2002: 84). Macro-environmental factors include levels of demand, economic situation, political situation, competitive development and social responsibility concerns (Kotler 2001: 222). Ashill and Jobber (1999) studied the impact of environmental uncertainty perceptions, decision-makers characteristics and work

environment characteristics on the perceived usefulness of MkIS, and they found that external environments influence the actors' perception toward the use of MkIS as it causes uncertainties; the more complex the external environment, the greater uncertainty they perceived (Ashill *et al.* 2001; Ashill *et al.* 1999). These factors create uncertainties that challenge decision-makers to make decisions based on changes. Thus, ways to utilise resources to obtain decision-support may be influenced by these factors.

*Economic situation* includes all those economic indicators such as inflation rate, exchange rate, unemployment rate that may affect organisations. It influences customers' behaviour, demands and other factors. Changes in the economy affect the purchasing power of both customers and end-users; the decision-makers need to be aware of the economic situation. It also affects investment in the organisation. Good economic conditions may lead to more investment in facilities, a greater budget for gathering 'facts' to support decision-making. Furthermore, Ashill (2001; 1999) has found that perception of external environmental factors including economic situations affects the perception toward the usefulness of MkIS.

*Political situation* especially governmental influences can shape the decision-making process (Miller *et al.* 1997: 297) because it affects the market situation. Government support may create competitive advantages for organisations. Laws and regulations can be either opportunities or threats. The government is the most important influencing factor regarding changes in law and regulations. Organisations that the government supports may have competitive advantages over others. Decision-makers who work in these organisations may utilise resources different from the others.

*Market situation* includes the industry's levels of demand as well as competition in the market, whether it is high or low demand or competition within the industry (Kotler 2001: 222). In a highly competitive market, decision-makers may not have sufficient time to gather all desired 'facts' from various sources; the way they utilise resources would be differences from when they have sufficient times. In contrast, in low competitive markets, the actors may have plenty of time to gather desired 'facts' from

many sources, they however may not have enough budget to obtain all the facts. In different competitive situations, the support required is altered by facts, time pressure, or budget, which may result in different ways of resources utilisation.

Changes in these market related factors would influence the position of the organisation, and decisions may need to be reviewed in order to develop a new strategy (Xu & Kaye 1995: 24). Although little research focused on the relationship between macro-environmental factors and decision-making process in B2B organisations appears to have been undertaken, some research on environmental factors affecting MkIS design, development or implementation has been found (Ashill *et al.* 1999; Ashill *et al.* 2001; Chang & Lin 1990; Ghingold *et al.* 1998; Xu *et al.* 1995).

#### **2.4.4 Other related factors**

Some significant factors have not yet been included, for instance, decision-making process, types of decisions, and priority of the decisions. These factors were studied and found to influence organisational decision-making, but was not accumulated in the above sets of factors (e.g. Choo 1998; Miller *et al.* 1997; Moorhead *et al.* 1998). These factors interact with some of the above factors and thus may alter resource utilisations of the actors.

*Decision-making process* includes the consideration that Bazerman (2001: 2-3) stated that the decision-making process is structured when applying rational decision-making theory. However, Matsatsinis *et al.* (2003a: 4-5) urged that “decision-making is an exclusive attribute of human thinking and judgment”; the decision-making process is not structured or programmed but is either semi-structured, or unstructured. With structured decision-making process, actors always use the same process and predefined manner to make decisions (Moorhead *et al.* 1998). Semi-structured decision-making processes need cooperation and interaction between decision-makers and predefined solutions to reach the optimal answers. In unstructured decision-making processes, the decisions could not be structured and solved in a specific and predefined manner (Moorhead *et al.* 1998). Different processes need different treatments; decision-makers may choose to alter the ways to utilise the resources to match with the decisions they are dealing.

*Types of Decisions* mean that different types of decisions can be processed in different ways (Miller *et al.* 1997: 295). Simon (1960) classified decisions into two types: programmed and non-programmed decisions. Programmed decisions refer to routine decisions, which occur frequently. Non-programmed decisions are those unfamiliar, challenging, or rare decisions to be made. The existing resources, however, may or may not be able to provide required decision-support or they may not know what to look for.

*Priority of the decisions* deals with two dimensions: importance and urgency of the decision. Accounting for the two dimensions, decisions are prioritised as (Piercy *et al.* 1999: 268-9): -

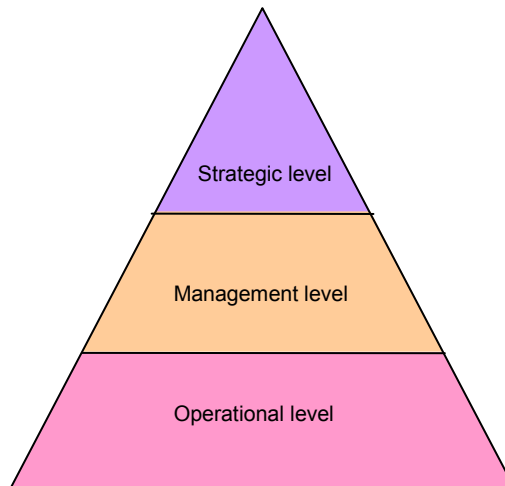
- Priorities - important and urgent decisions need speedy gathering of 'facts' to support decision-making. The decision-makers may not have time to go through many sources in the gathering of data.
- Time wasters – not important, it is just 'nice to know'. The decision-makers may just want to know the solutions.
- Short-term dilemmas – decisions are urgent but not important, decision-makers do not have to go deep and gather all required decision-supports to make the decisions.
- Long-term strategic – these decisions are important but not urgent, and decision-makers may take some time to gather all required decision-supports. The decision-makers may have enough time to go through all resources in detail to ensure the accuracy of support they use.

Priority of decisions, therefore, is one of the factors that may affect the way decision-makers utilise resources.

*Levels of decisions* are important because in an organisation, decisions can be classified into three levels (See figure 2.6): strategic, management and operational levels (Parkinson 1994: 363-371). Strategic marketing decisions deal with strategic planning and market modelling. Management marketing decisions deal with market profiling and targeting, developing effective direct marketing, etc. Operational or transactional decisions are involved with managing the transactions with customers. Each level of decisions needs different types of decision-supports, according to the nature of each decision.



**Figure 2.6: Levels of decisions**

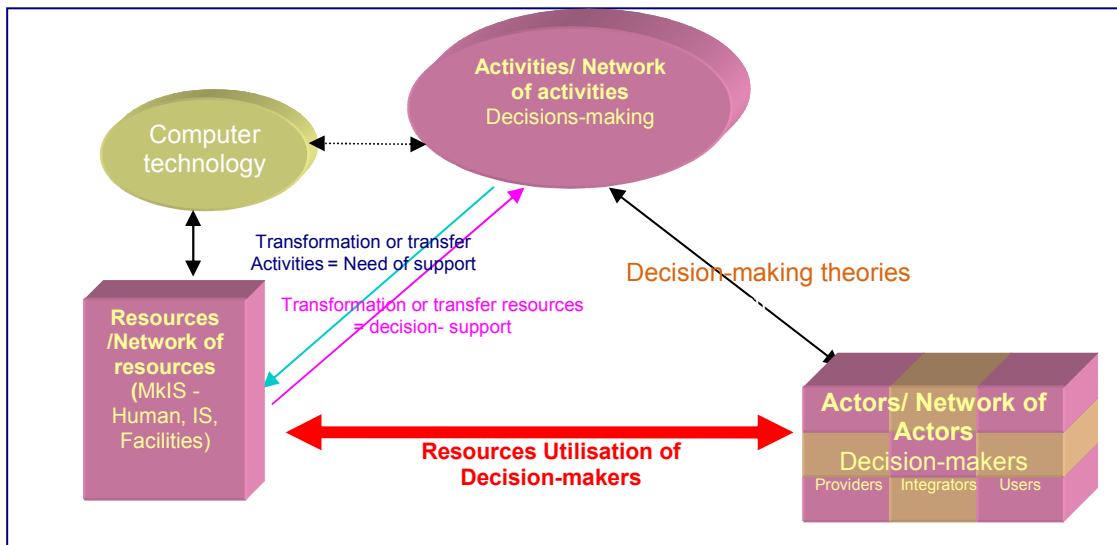


Based on the literature, these five groups of factors would generally influence organisational decision-making including B2B organisation. Thus, they could also influence the actors on how they are going to utilise resources available. Webster *et al.* (1972) state that these influencers could be seen as interdependent to each other, which means if one of the factors change, it could lead others to be modified and result in modification of the resources utilisation. After factors may influence the resources utilisation of the actors are listed and described, a synthesis of the factors in order to form conceptual frameworks for this study will be illustrated in the following section.

## **2.5 Conceptual framework**

Based on the ARA model, decision-making and resources utilisation discussed above (sections 2.2 and 2.3), a conceptual framework could be drawn as figure 2.7. In this research, three subjects are involved: actors or decision-makers and their networks, activities or marketing decision-making and their networks, and resources and their networks. The focus of this research is shown by the red arrow, which is the interaction between actors and resources. That is to say, the locus of this thesis is on resources (MkIS)' utilisation of decision-makers to support their marketing decision-making in the B2B context. Ways the decision-makers utilise resources in making decisions may vary depending on who are the actors i.e. who make the decision: providers, integrators or users.

**Figure 2.7: ARA model and decision-making**



Moreover, as presented in section 2.4, five main factors may shape the resources utilisation of the actors. Figure 2.8 could be drawn in order to demonstrate tension between the decision-makers and the utilisation of the resources and the factors that may affect the resources utilisation. For further illustration, figure 2.9 lists factors and sub-factors, from the literature presented in section 2.4, which may influence the ways decision-makers utilise the resources. Seventeen sub-factors are listed in figure 2.9. Although information system related factors could influence the ways decision-makers utilise resources, due to the definition of MkIS, information system(s) is a part of MkIS, they are totally neglected in this study. That is to say they may have other factors involved with information system e.g. IS development, or implementation that may influence the resources utilisation of the actors; however, they have not been included in the framework. Study all the above factors at once is far too complicated. A sole main set of factors is thus chosen: B2B related factors. These B2B related factors could be seen as undeniable since this study focuses on utilisation of the MkIS in B2B context and these factors distinguish B2B from B2C.

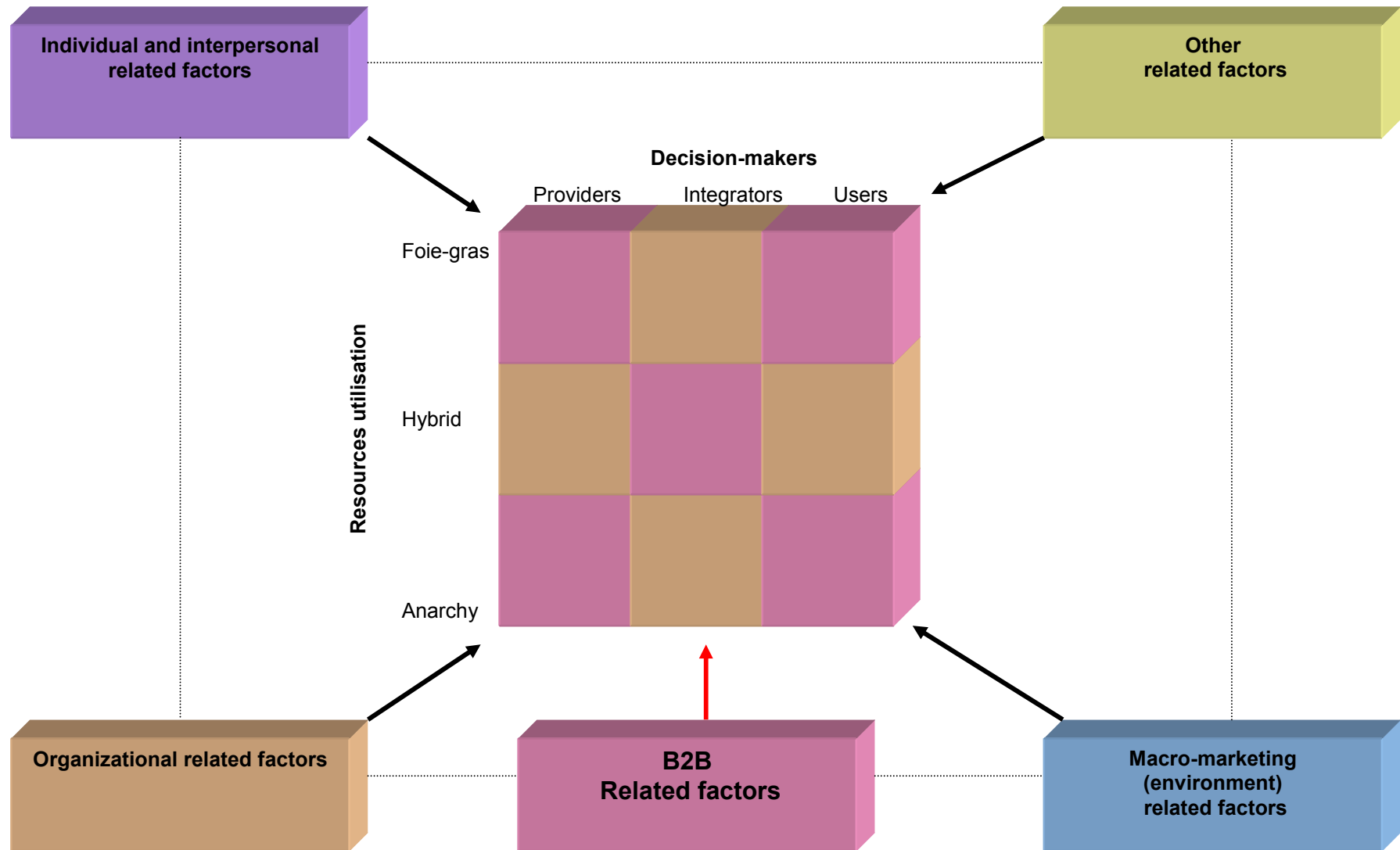


Figure 2.8: Conceptual framework #1

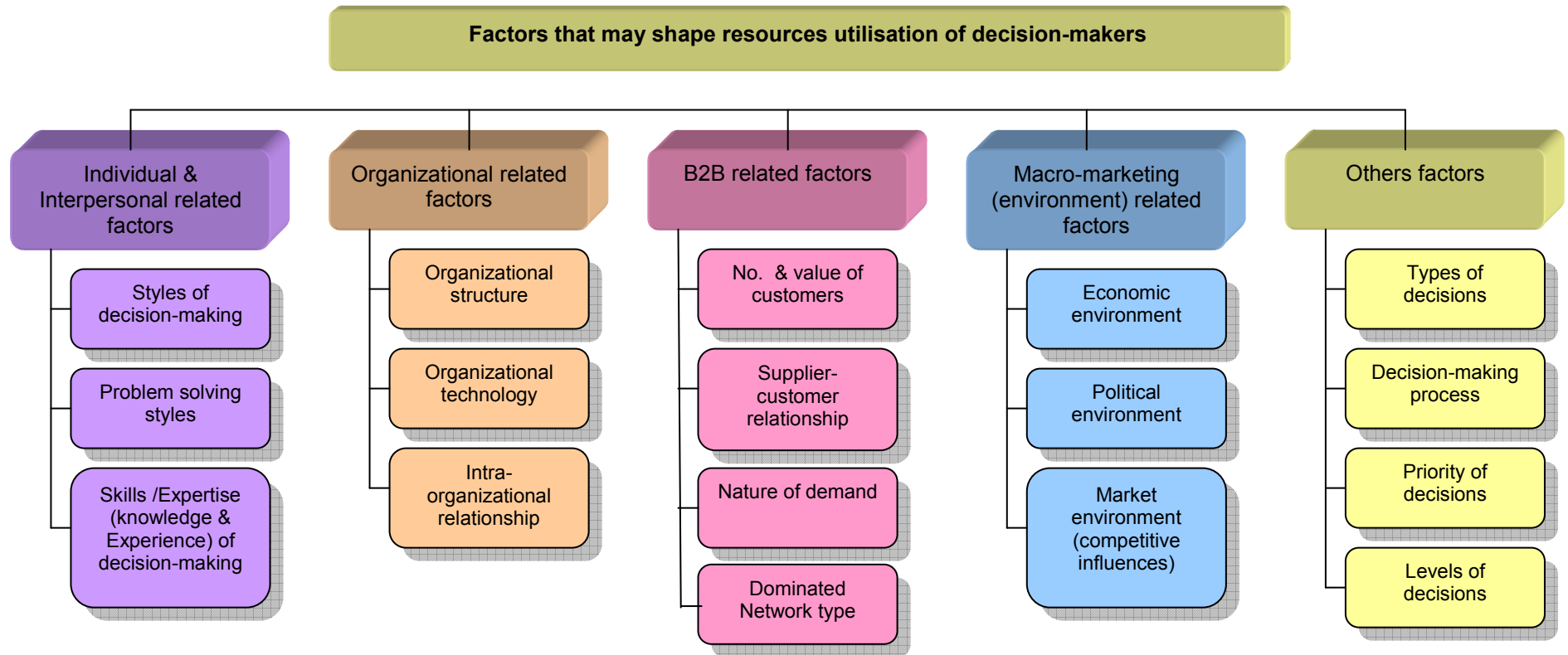


Figure 2.9: Conceptual framework #2

## **2.6 Conclusion**

Based on the ARA model, an understanding of how decision-makers utilise resources to support their B2B marketing decision-making is an investigation on interactions between the actors (decision-makers) and the resources (MkIS) in performing the activities (decision-making). The actors would utilise the resource in a way that lie between a linear or foie-gras and anarchy depending on views toward decision-making processes: coherent or chaotic. In addition with buying the decision-making model of Webster and Wind (1972) and Kotler (2001) as well as various sets of literature, five groups of factors: personal and interpersonal, organisational, B2B, macro-environmental, and other related factors could influence the ways decision-makers utilise the MkIS. These factors include several sub-factors that were listed in figure 2.8 and some that were not. The sub-factors listed in the figure were those ones that were proven in the pilot study to have influenced the resources utilisation. These factors were somewhat unequal as most of them were changing according to individuals or environments, yet the B2B-related factors would influence any B2B organisation equally as these factors are related to every individuals and organisations who operated in B2B context. The pilot study was then conducted in order to explore the resources utilisation as well as to verify the research method for this investigation. Consequently, the pilot study helped to shape the context of this research in both setting the boundaries of the literatures and the scope of this study. In addition, three initial sets of interview questions were developed for the pilot study being one for each group of actors to ensure possibility to complete the study. In the next chapter, a discussion on findings and challenges found in the pilot study is illustrated that lead a narrowing down of the scope of the study. Research propositions are then proposed later in the next chapter.

## **CHAPTER 3**

# **REFINING RESEARCH QUESTIONS & RESEARCH FRAMEWORK**

### **3.0 Introduction**

Purposes of this chapter are to present research questions that have been altered as a result of pilot study and to propose a framework and propositions to analyse the findings. This chapter is then starting with results of the pilot study. The pilot study was conducted to obtain general information of the organisation as well as ideas on what and how factors influence the resources utilisation of the actors. It also helped with development of research questions and propositions as well as verification of interview questions and research method. The findings have led to a narrowing down of the scope of the study to emphasise only B2B-related factors from previous studies where all factors would influence the resources utilisation. The research questions and the scope of the study are then refined to fit the scope. The research framework is then consequently altered. After that, research propositions are then proposed based on the literatures and the findings of the pilot study. A conclusion on overall modifications is presented in the last section.

### **3.1 Results from pilot interviews**

The research aims and questions are specified in chapter 1, and factors that could have influence ways the actors utilise resources are identified based on previous research in chapter 2. Three sets of questions for in-depth interviews were developed and used for pilot interviews, with one for each group of actors. Pilot interviews were conducted with three respondents who worked in Siam City Cement Public Company Limited<sup>7</sup>, which will be referred to as “Siam City Cement” from now onward. Initially, the meeting’s purpose was to ask permission to use the company as a case study and gather some basic information, for instance, the company’s existing resources, the number of decision-makers who deal with marketing

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<sup>7</sup> Siam City Cement Public Company Limited is the second biggest cement producer in Thailand, further detail about the company will be provided in chapter 6.

decision-making, and to what extent the decision-makers utilise resources. At the first meeting, chances to discuss with three decision-makers were granted immediately. It was therefore a good opportunity to obtain information as well as to verify the interview questions, find out time usages and other factors that may be involved with the resources utilisation. The three interviewees each from a different group: user, provider and integrator. The provider was a system analyst; the integrator was a salesperson, and the user was one of the managers. The three interviews were recorded using Minidisks to assist the researcher in keeping all data. These interviews took just over three hours for each interview, which is a lot longer than expected since it was thought that it would be an obstacle to interview decision-makers who have time limits.

Here are the results of the pilot study. In sum, Siam city cement is one of the leading Portland cement and mixed cement manufacturers and exporters in Thailand. It is the second largest domestic supplier of cement. After the Thai economic crisis in 1997, which had a huge effect on its construction industry, the company was taken over by "Holcim", one of the world's biggest cement producers in 1998. A new management team was therefore established. The company has changed from a Thai family-run business to an international company. Under this new management team, the company has developed and implemented various resources used for supporting decision-making especially, information systems such as SAP, WebSales, and CRM. The company also hired a new group of employees (new blood) who are mostly recent graduated from abroad and have English literacy. Figure 3.1 presents the MkIS used in the company, which comprises of IS/IT tools, humans and their relationships, and physical facilities.

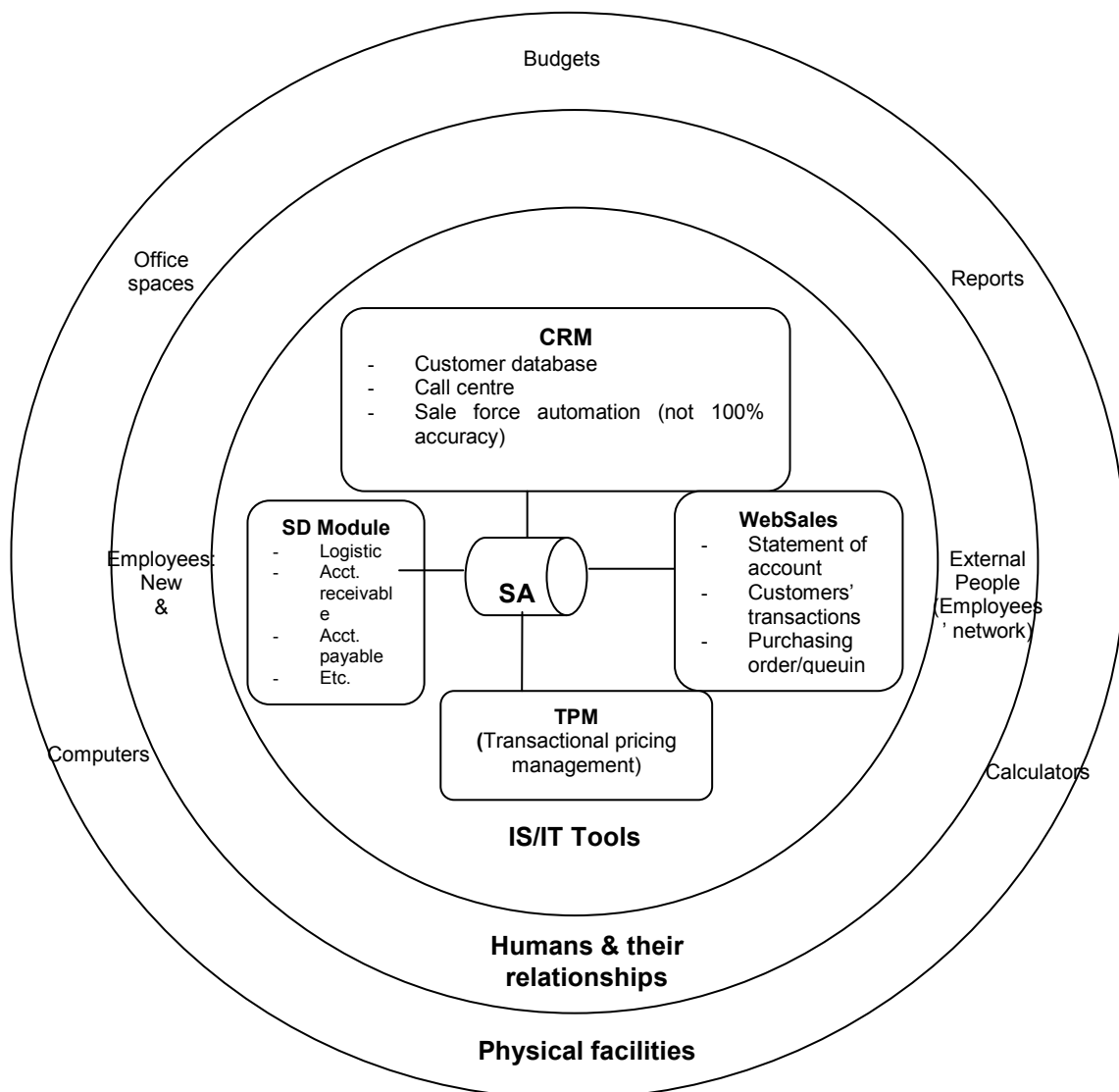
Moreover, the interviews also indicated that the SAP has been implemented and used as a backbone of the company's information system(s); to store, manipulate, and integrate internal information from various departments including sales and marketing, production, accounting, and finance departments. The software was not selected by in-house decision-makers, but it has been installed as a requirement from Holcim, its mother company. Thus, the providers are there only to maintain and

perhaps develop some add-in applications. The provider however seems to happily work in this situation. As she mentioned during an interview that:

*“... the systems we have here, in our company, are the most advanced technology compared with the others in our same industry. They are very useful and powerful to support decision-making as well as other activities. It offers the users almost all data or information they would require.”*

*(Interview of a provider)*

**Figure 3.1: Existing MkIS in Siam City Cement (As of July 2004)**





In contrast, the users and integrators were forced to make use of the systems, however, some do abandon it with excuses of *“The server is down when I would like to use it.”*, *“My English is not good enough (to use it)”*, or *“I know my customers better than the system”*. The salespersons were forced to input data collected each time they visit each customer into the SAP, however, the data or information input could have been manipulated one just to match with the managers’ preferences.

*“... for example, time spent with each customer, we have been suggested at least two hours should spent in each visit; however, sometime the customers did not want us sitting in their shops, talking to them for such a long time because they want to do their businesses. When I wrote reports/input data in datasheet, I have to basically make number up. Moreover, sometime when I have to ask for customers’ details, and they do not want to tell me, I therefore put some typical information such as she likes flower, he plays golf, or their kids like travelling, in order to complete the datasheet. ...”*

*(Interview of a salesperson)*

The findings from these pilot interviews have also raised several methodological issues. First, structured questions are sometimes invalid to some respondents i.e. there are several questions the respondents did not understand and cannot respond to. For example, the provider cannot answer some questions regarding the company’s customers, and the views of who are their customers are varying; the provider views internal staff as his/her customers, the user sees customers and end-users as his/her customers, while the integrator mentioned all of them as his/her customers. Some questions, therefore, needed to be reviewed. Secondly, concerning the interview time, it took over three hours to go through all the issues, which is very long and most respondents can offer only a limited amount of their time, approximately one to two hours. In order to response to these issues, a set of research issues to be addressed during the interviews was developed and employed as a guide for the researcher to ensure that fair and similar questions are asked to all the interviewees instead of three sets of questions for each group of respondents. The scope of the study was

therefore refined to narrower foci to emphasise only the influences of the B2B related factors on the resources utilisation of the actors, which will be discussed in the next section.

### **3.2 Refining research questions**

The B2B related factors could be seen as undisputable factors due to the fact that this research is conducted in B2B context, and they would make the B2B resources utilisation of the actors distinct from the other. They could also influence the resources utilisation in such different ways. Whereas the other groups of factors listed in the conceptual frameworks, (figures 2.8 and 2.9) would also affect in the B2B as well as the others. Hence, instead of concentrating on every factor, this study was narrowed so the scope had emphasis only on one group: B2B-related factors, as they seem to equally influence every B2B actors, while the other groups may not. The aim of this research is still to investigate and understand how B2B decision-makers (including providers, integrators, and users) make use of available resources (MkIS) to support their marketing decisions. In order to accomplish the research objective, sub-questions are then, refined as follows:

3. What B2B related factors affect resources utilisation of B2B decision-makers in association with their decision-making process?
4. How do these factors affect the utilisation of the resources for the purpose of decision-support in B2B organisations?

The B2B related factors as defined and discussed previously in section 2.4.3.1 are: number and value of customers, supplier-customer relationships, nature of demand, and dominant type of network. Each factor may influence the actors to act differently in making use of the available resources i.e. existing MkIS. These factors could be interdependent to each other and would influence the resources utilisation depending on how they are combined. The research framework is, therefore, refined as shown in figure 3.2. The Figure illustrates the locus of this research i.e. the factors that may influence the decision-makers (providers, integrators, and users) in utilising their available resources (existing MkIS) to obtain the desired decision-supports lies in two different extremes: foie-gras or anarchy.

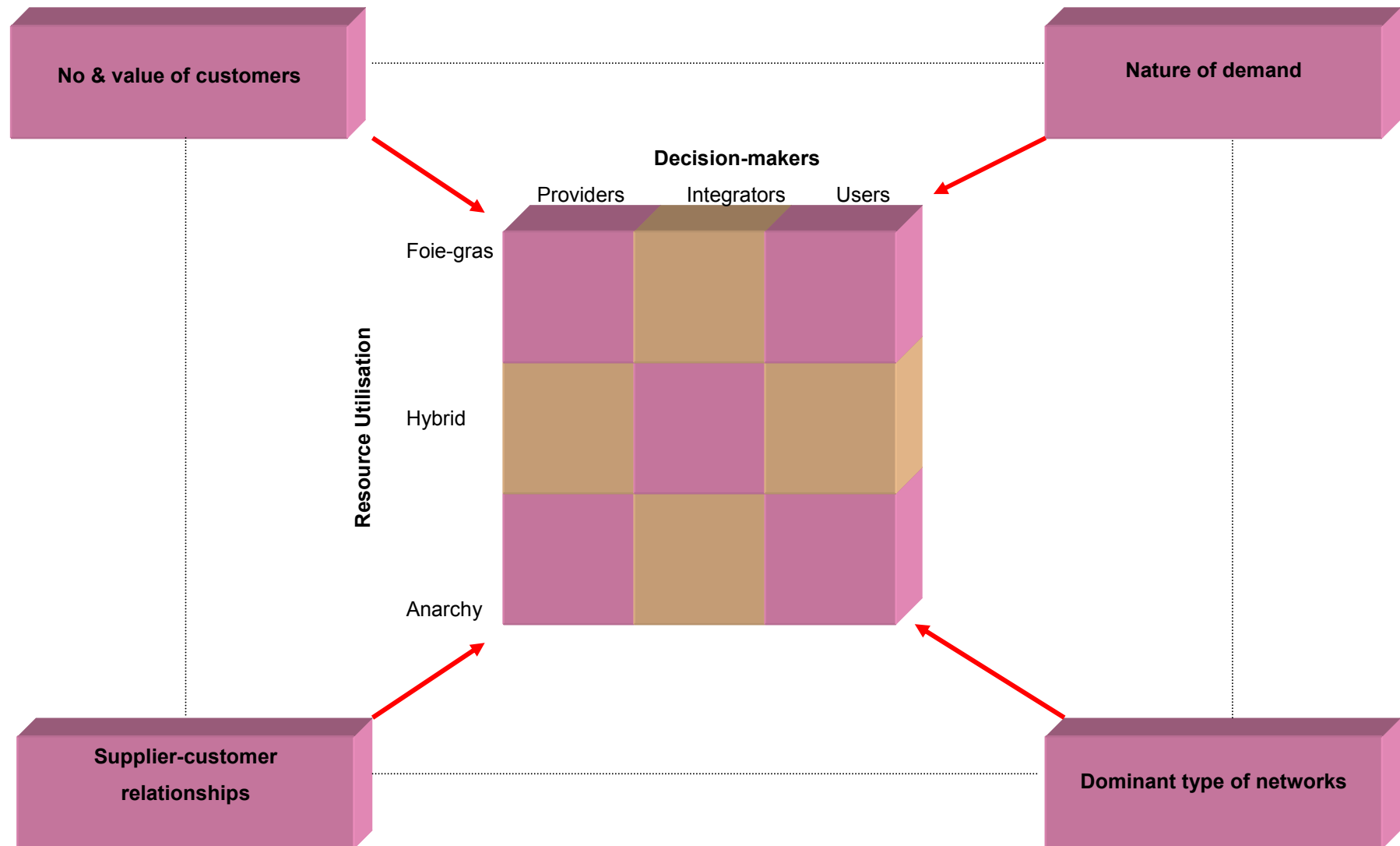


Figure 3.2: Research Framework: B2B factors affect resource utilisation in decision-making

### 3.3 Research Propositions

This section is illustrating how the B2B related factors could influence the resources utilisation of the actors. As discussed in section 2.4, these factors play an important role in influencing the actors to act differently in using the available resources to obtain necessary decision-supports. The discussion below is only proposed to illustrate the ways these B2B related factors may affect the resources utilisation of the decision-makers.

**Table 3.1: Propositions on how B2B related factors might influence the resources utilisation**

	No. & Value of customers	Supplier-Customer relationship	Nature of demand	Dominant type of network
<b>Foie-gras</b>	4000	Distant Short-term	<ul style="list-style-type: none"> <li>• Planned</li> <li>• Derived solely from customers</li> </ul>	Supply
<b>Anarchy</b>	2	Close Long-term	<ul style="list-style-type: none"> <li>• Ad-hoc</li> <li>• Derived from customers and end-users</li> </ul>	Distribution

***Proposition 1: for decisions regarding the large number of customers or less valuable customers, actors may utilise resources using foie-gras. Contradictory, for smaller numbers of customers or high value customers, actors would rather employ the anarchy resources utilisation.***

Typically, the value of customers in a B2B organisation is not equal, due to the fact that each customer has contributed differently to company especially in terms of purchasing volume i.e. some customers are more important than the others (Dwyer *et al.* 2001: 8; Ford *et al.* 2002: 5). For instance, a B2B organisation has many customers; saying for example, they have 4,002 customers. Two customers generate approximately eighty percent of the total sale; the other 4000 generate the rest. In this case, decision-makers who deal with the big two customers may need flexibility and capability to obtain decision-support required; they may have to ensure

that the decision-support obtained is sufficient and accurate; they, therefore, may prefer anarchic ways of utilising the resources (Cohen *et al.* 1972) that allow the decision-makers to choose and use the resources they comfortable with. In contrast, if they deal with one of the 4000 customers, they do need some decision-support to base their decisions on. They, then, may make decisions in a systematic step-by-step manner based on what resources are available or given at that time (Moorhead *et al.* 1998). They, therefore, may prefer the foie-gras method i.e. someone or something that promptly provide the support their required.

***Proposition 2: for decisions regarding distant or short-term customers, actors may utilise resources using foie-gras. In contrast, decisions regarding close or long-term customer, the actors would prefer to employ the anarchy resources utilisation.***

Consider two customers: one with closed relationship i.e. the decision-maker knows the customers well, has been working together for a long time or may have personal relationship with the customer, another with a certain distance i.e. the decision-maker may not know the customer well enough, or has just started doing business together. If the decision-makers have to deal with both of them, how would they use their resources? Regarding the former, the decision-makers, especially users, may have a personal relationship with someone who works as a key decision-maker in the customers' organisation. They may prefer to exercise their relationships to obtain the decision-support; they, therefore, may utilise the resources toward an anarchic way. Moreover, with closed relationship customers, both organisations may have integrated information systems such as IOS that share information between customers and suppliers. In this case, resources utilisation may be different from the above. The decision-makers may use certain information from the IOS to generate decision-supports, if it is sufficient. They, however, may also exercise their personal relationship to gain other information if it is insufficient. They, therefore, exercise the resources somewhere in between the two extremes. On the other hand, dealing with a distant customer, decision-makers may have limited resources; they then prefer to obtain the decision-supports all at once.

Types of relationships between an organisation and its customers and/or suppliers may also affect the resources utilisation (Berthon *et al.* 2003; Michel *et al.* 2003) as discussed in section 2.4.3.1. All of the four types could exist in an organisation. The decision-makers may alter their ways according to the types of relationships with the customers or suppliers. For example, if the company integrates with one customer with hierarchies' type of relationship (the Toyota ones), i.e. the link is linear; the company does not connect to the second or the third tiers. When the decision-makers would like to obtain decision-support related to the second or the third tiers, they may utilise resources tending toward the anarchic way. On the other hand, if they require only decision-supports that relate to the customers or suppliers, they may utilise the resources toward the foie-gras way.

***Proposition 3: in the case where demand for products and services from the company derived solely from customers, who are planned, the actors may utilise resources in a foie-gras way. In contrast, the actors may exercise their resources in an anarchy way when the demand is derived from customers and end-users.***

Nature of demand could be viewed in various ways such as derived demand or planned/unplanned demand (Haas 1976; Kotler 2001). In section 2.4.1, the concept of derived demand has been discussed. Demand is separated into demand solely derived from customers and demand derived from customers and end-users. If demand is derived from customers, decision-makers may not need to know and understand the end-users of the customers' products. They then may use available resources about the customers to obtain the decision-supports. On the other hand, the actors may have to exercise some activities such as marketing research to generate decision-supports related to the end-users. That is to say, they may tend toward the anarchistic way if the demand is derived from end-users as well as the customers.

As stated, the demand could also be classified as: planned and unplanned demand. The former could be a result of adaptation to the customers and suppliers (Berthon *et al.* 2003). For example, a product is developed to supply only to one customer. They may have an IOS link to each other for

their production plan. In this case, the decision-makers could only make use of information in the IOS to support certain decisions. For ad-hoc demand, the decision-makers may have to gather decision-support from different resources. This seems to be more foie-gras if they have planned demand.

***Proposition 4: dominant type of networks in an organisation could influence the ways the actors utilise resources, i.e. if the organisation is dominated by distribution network, the actors may employ anarchy resources utilisation. On the other hand, if the supply network is dominant, the decision-makers may utilise the resources in a foie-gras manner.***

In B2B, customers and suppliers work as a network (Ford *et al.* 2002). Ford suggested two types of networks: distribution and supply networks. Both of them could exist within an organisation, yet, one only will dominate. If a distribution network dominates, the decision-makers may be faced with more relationships with their partners that are complicated. It then may be difficult for them to deal with in a systematic and step-by-step process. They, therefore, may utilise the resources toward the anarchic way (Cohen *et al.* 1972). In contrast, the supply network is relatively simpler; links between suppliers and customers are more obvious which could result in an integration between them similar to the JIT system of Toyota (Ford 2002) that leads lots of information flow automatically in and out the organisation. Hence, the available resources may allow decision-makers to employ resources in a foie-gras way.

### **3.4 Conclusion**

Results of the pilot interviews have led to a narrowing down of the scope, and a modification of the research questions. This research attempts to provide a better understanding of how actors (decision-makers) utilise resources (MkIS) in performing the activities (decision-making). However, only B2B-related factors are the main emphasis for factors would have influence the resources utilisation as it seems to have equal influences on each B2B organisation, while the other does not. Based on the literature and the results of the pilot study, these factors include four sub-factors: number and value of customers, supplier-customer relationships, nature of

demands, and dominant type of network. In addition, the other factors, which were listed in the conceptual frameworks presented in the previous chapter, and were found to produce noteworthy effects on the resources utilisation during the interviews as they may influence certain individual actors, which will also be accumulated into the results to reach the research aim and form a conclusion. As a result of the pilot interviews, several methodological issues were identified. The next chapter discusses the methodology and method employed in completion of this thesis and illustrates especially how this research was conducted in detail, in order to trigger all the issues raised in the pilot interviews.



# **CHAPTER 4**

## **RESEARCH METHODOLOGY**

### **4.0 Introduction**

This chapter is devoted to methodology. It will expand on the brief account provided in the introduction and then explain the research design in detail. This chapter aims to present the methodology underlying this study, as well as methods employed in the completion of this thesis. It starts with the concept of methodology in general. This will be followed by a discussion regarding methodological issues to provide further arguments on how the epistemological stance adopted provides a link between the aims of this study and the practical methodological issues for data collection. Moving away from the theoretical discussion to more practical concerns, an illustration of overall research design employed in this thesis will be explained including case selection strategy, gaining access to each case, and how the respondents were selected. Then, the data collection process employed in this thesis will be described and justified preparatory to issues being addressed in the interviews, choosing the respondents in each case, and producing archives and records of the interviews. The data analysis procedure adopted in this research will be presented next, including coding procedures, reducing the data, and making sense of the data. Further discussion concerning the strengths and limitations of the methodology exercised in this study will then be included as well as issues regarding the validity and reliability of this research, followed by a discussion of the ethical issues. Followed by a section called dilemmas which briefly describe challenges and difficulties the researcher faced when conducting this research. A summary of all the above issues will finally be presented in the last section.

### **4.1 Nature of the qualitative approach and its techniques**

Research methodology is usually classified as quantitative, qualitative or mixed methodology or called triangulation (e.g. Bryman 2001a; Churchill 1999; Creswell 2002; Johnston & Spekman 1995; Malhotra *et al.* 2003). These methodologies are applied in various disciplines and perspectives including marketing. Mariampolski (2001: 7) states in his qualitative market

research that qualitative research usually “encompasses a family of approaches, methods, and techniques for understanding and thoroughly documenting attitudes and behaviour”. Qualitative research, in general, “seeks the meanings and motivations behind behaviour as well as a thorough account of behavioural facts and implications via a researcher’s encounter with people’s own actions, words and ideas” (Mariampolski 2001: 7). Qualitative research has been defined differently in practitioner and academic literatures (Catterall 1998). The practitioners define qualitative research as “What is not quantitative or measurement research” (Catterall 1998), i.e., it has been defined on the basis of the data collection methods employed in the research. In contrast, academics classify qualitative research on the basis of philosophical and theoretical underpinnings of the research (Catterall 1998). Neither of these approaches can be seen as absolutely right. There are always exceptions. By defining qualitative research in opposition to quantitative research, practitioners consider that numbers and computers have no place in analysing qualitative data (Catterall 1998). In contrast, many academics employ computer programmes (e.g. NVIVO, Ethnography, N6) and the numerical manipulation (e.g. numerical coding) of qualitative data to provide valuable insights. Similarly, Catterall (1998) adds that the academic researchers who portrayed survey as a tool of positivism can exclude research that employs an open-ended questionnaire survey that collects qualitative data. This shows that method employed in conducting a piece of research does not necessary imply the philosophy underpinning the research.

**Table 4.1: Summary of characteristics of qualitative research**

Characteristics	Denzin & Lincoln (2005)	Malhotra & Birks (2003)	Creswell (1997)	Bigden & Biklen (1992)	Eisner (1991)	Merriam (1988)
Natural setting (field focused) as sources of data	Yes	Yes	Yes	Yes	Yes	Yes
Researcher as key instrument of data collection	Yes	Yes	Yes	Yes	Yes	-
Data collected as words & pictures	Yes	Yes	Yes	Yes	-	Yes
Outcome as process rather than product	Yes	Yes	Yes	Yes	-	Yes
Inductive analysis of data, attention to particulars	Yes	Yes	Yes	Yes	Yes	Yes
Focus on participants' perspectives and their meanings	Yes	Yes	Yes	Yes	Yes	Yes
Use of expressive language	Yes	Yes	Yes	Yes	Yes	-
Persuasion by reason	Yes	Yes	-	-	Yes	-
Philosophical assumption – interpretive & naturalistic	Yes	Yes	Yes	-	-	-

Adapted from: Creswell 1997, Malhotra & Birks (2003) and Denzin & Lincoln (2005)

It is thus time to consider the characteristics of qualitative research. Many authors give definitions of the term qualitative research; Table 4.1 illustrates the common characteristics of qualitative research. As can be seen in the table, natural setting is a common characteristic of qualitative research. Qualitative research is generally discussed and concluded based on an inductive approach. Additionally, the focus of conducting qualitative research is on respondents' perceptions. Some authors, such as Bigden & Biklen (1992), Merriam (1988), just give simple definitions, and do not mention any paradigm at all in their books or articles, but others emphasise it. The latter group's definitions encapsulate the common characteristics and extend them with philosophical stances, for example, the definitions given by Denzin & Lincoln (2005: 3), Creswell (2002), and Malhotra *et al.* (2003: 133). Creswell (2002) gives a slightly different definition which emphasises a complex, and holistic picture.

*Qualitative research is an inquiry process of understanding based on distinct methodological traditions of enquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting.*

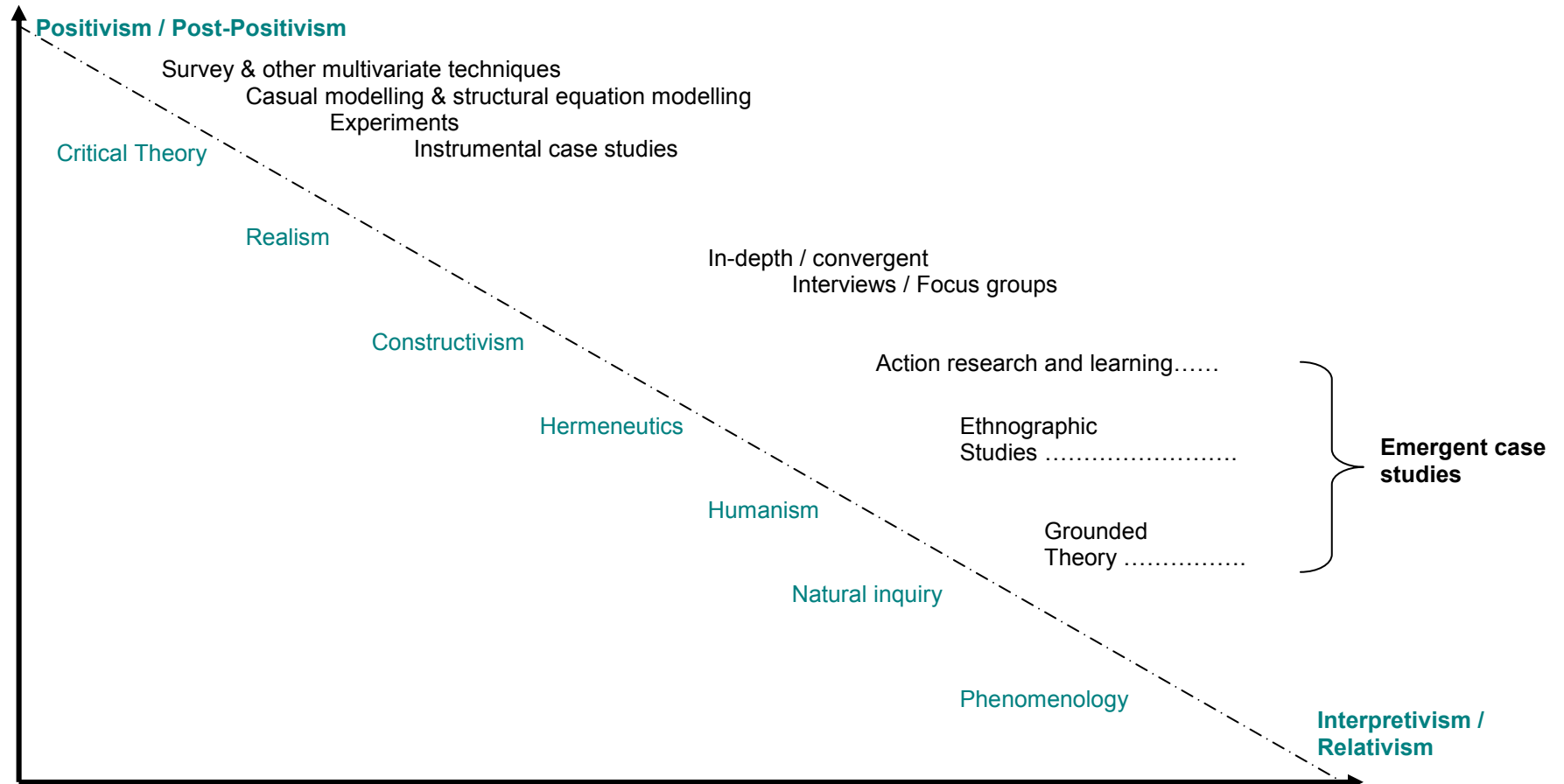
A significant key difference between qualitative and quantitative research is that quantitative researchers work with a few variables and many cases, whereas qualitative researchers rely on a few cases with many variables (Creswell 2002; Creswell 1997).

#### **4.1.1 Philosophical Stances**

In academic research, methodology is usually justified by its philosophical and theoretical standpoints. This research will follow this approach. This section is devoted to a discussion on the paradigm underpinning this research. Research philosophy ranges across the continuum of positivist and interpretivist positions (Bryman 2001a; Carson, Gilmore, Perry, & Gronhaug 2001; Easterby-Smith, Thrope, & Lowe 2002; Malhotra *et al.* 2003). Figure 4.1 demonstrates the range of data collection methods and their usual philosophical underpinning. Note that some exceptions may occur; for example, in-depth interviews may stand at a positivist position, similarly, a questionnaire survey could also be classified as an interpretivist stance depending on the nature and the context of the research. As can be seen in the figure, on a continuum, research philosophy can be divided into nine categories based on their ontology and epistemology. The two philosophical stances named above are positivism and interpretivism. When in a discussion, the most common concept is that a paradigm consists of three different parts (Carson *et al.* 2001; Manunta 2000), which are:

- Ontological or “What is the nature of reality?”
- Epistemological or “What is the relationship between the knower (the inquirer) and the known (knowledge)?”
- Methodological or “How the inquirer should go about finding out the knowledge?”

- Emphasis on theory testing & measuring
- Prior theory may be generate hypotheses
- Deductive
- Relatively structured
- Researcher objective, external perspective



**Figure 4.1: Methodologies in the context of research philosophies**

Source: Adapted from Carson et al. (2001) p 8 and 62

- Emphasis on theory building, meaning & understanding
- Prior theory may be used at various times
- Inductive
- Relatively unstructured / semi structured
- Researcher involvement as instrument

In order to discuss the paradigms underpinning this research, the answers to the three questions are presented in table 4.2, from the positivism and interpretivism perspectives.

**Table 4.2: Broad definitions and explanations of the philosophical stances**

	<b>Positivism</b>	<b>Interpretivism</b>
<b>Ontology</b>		
Nature of 'being' / nature of the world	Direct access to the real world	No direct access to the real world
Reality	Single external reality	No single external reality
<b>Epistemology</b>		
'Grounds' of knowledge / relationship between reality and research	Possible to obtain hard, secure objective knowledge	Understood through 'perceived' knowledge
	Research focuses on generalisation and abstraction	Research focuses on the specific and concrete
	Thought governed by hypotheses and states theories	Seeking to understand specific context
<b>Methodology</b>		
Focus of research	Concentrates on description and explanation	Concentrates on understanding and interpretation
Role of researcher	Detached, external observers	Researchers want to experience what they are studying
	Clear distinction between reason and feeling	Allows feelings and reasons to govern actions
	Aim to discover external reality rather than creating the object of study	Partially creates what is studied, the meaning of the phenomena
	Strives to use rational, consistent, verbal, logical approach	Use of pre-understanding is important
	Seeks to maintain clear distinction between facts and value judgements	Distinction between facts and value judgements less clear
	Distinction between science and personal experience	Accepts influence from both science and personal experience
Techniques used by researcher	Formalised statistical and mathematical methods predominant	Primarily non-quantitative

Source: Carson *et al.* 2001 page 6

In the area of marketing research, various paradigms could be adopted depending upon the circumstances prevailing and the nature of the topic or the research issues (Carson *et al.* 2001). The bipolar paradigms are

commonly applied to justify research: positivism and interpretivism (e.g. Carson *et al.* 2001; Easterby-Smith *et al.* 2002). Some researchers, however, claim that both approaches should be used, arguing that mixed methodologies would “contribute to the richness” (Borch & Arthur 1995: 423).

This research attempts to understand the way marketing decision-makers utilise resources in supporting their decision-making. Figure 4.1 and Table 4.2 above illustrate the distinctions between positivism and interpretivism. Clearly, the aim of this research is to seek the understanding of the context. It is time to consider what the philosophical stance point for this research is. It is possible to be positivist doing inductive qualitative research. Prior theories and knowledge were employed several times as pre-understanding, which will be explained in detail later in this chapter. This research is inductive and relatively unstructured; the researcher would like to experience the contexts that were studied and the researcher is involved in this thesis as an instrument.

#### **4.2 Methodological Issues**

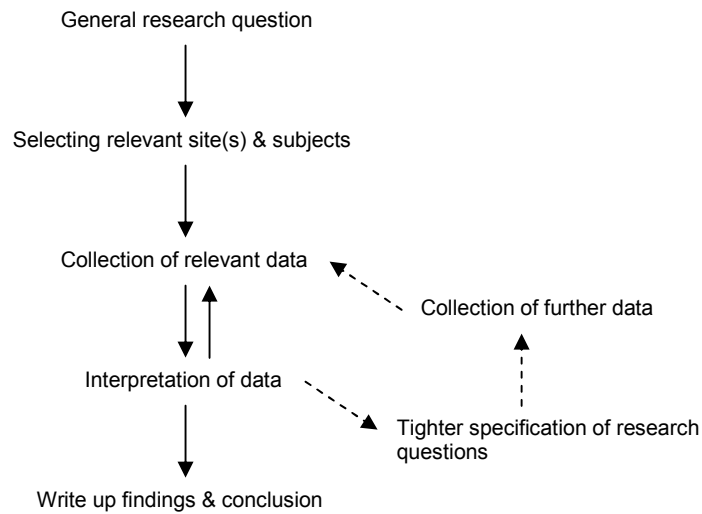
As stated in the previous chapter, this research aims to provide a better understanding of how the B2B decision-makers utilise resources to support their decision-making. A qualitative approach seems to be the most appropriate one to reach the objectives. Several authors have provided encouraging reasons for conducting qualitative research that are also applicable to this study. The first reason is concerned with the nature of the research question, Creswell (1997; 2002) and Malhotra *et al.* (2003) similarly state that research questions often start with “how” or “what”; this research also questions the “how” and “what”. The second reason for a qualitative approach is that the topic needs to be explored, and theories are not available to explain the behaviours of respondents or the theories that need to be developed (e.g. Creswell 1997; Creswell 2002; Mariampolski 2001). In this research, factors were predefined as presented in figures 2.8, 2.9 and 3.2. They have mostly been obtained from previous literature; information related to these factors is not easy to obtain in a quantitative form because most factors are non-quantifiable such as value of customers, relationships with customers, and the nature of demand. Another reason for qualitative approach is these factors could be

interdependent with each other in affecting the ways decision-makers utilise resources. In order to explain the way decision-makers utilise resources a detailed view of each topic was required. As stated in prior section, a common characteristic of qualitative research is a natural setting. This thesis studies individuals in their natural setting, i.e., in their working environment. Sufficient time and resources to spent on extensive data collection in the field and a detailed data analysis of “text” information is another reason to conduct this research using a qualitative approach (Creswell 1997; Creswell 2002).

Bryman (2001a: 267) provides the main steps in conducting qualitative research. Figure 4.2 presents steps that are not linear, but could be considered as a cycle, more like a loop, where the researcher has to revisit some steps again and again until the research is completed. Research generally starts with the identification of general research question(s) and its aim(s) (e.g. Bryman 2001b; Creswell 2002; Easterby-Smith *et al.* 2002; Mariampolski 2001; Yin 2002). Selecting the relevant site(s) and subjects is next; this step also involves literature reviews and justification of the methodology and methods adopted in the research. Data collection is then started; this is the point where fieldwork is conducted beginning with the negotiation of access to organisations and respondents, then followed by the actual data collection e.g. interviews, focus groups and observations. After obtaining the required data, the researcher can then start to analyse and interpret the data. The research questions may have to be refined so they are more specific. Then, the researcher could go back to the respondents and collect further data until sufficient data has been gathered to answer the research question(s).



**Figure 4.2: Main Steps in Conducting Qualitative Research**



Source: Bryman 2001a page 267

Creswell (1997) classifies qualitative inquiry and research design into five traditional approaches: a biography study, phenomenological study, grounded theory study, ethnographic study and a case study. These five traditions have been employed in various fields including social science, humanities and sociology. Table 4.3 compares the five traditions of research design in various dimensions: focus, discipline origin, data collection, data analysis, and narrative form. As can be seen in the table, research design varies according to the focus of each piece of research. For example, a case study will be conducted when the research attempts to develop an in-depth analysis of a single case or multiple cases, whilst, grounded theory would be appropriate for research that focuses on developing a theory grounded in data from the field. The interview is a common method of data collection used in all the traditions, but would not be a sole method used in gathering data such as in ethnography and case study research design. A variety of techniques can be used in data analysis.

**Table 4.3: Dimensions for comparing five research traditions in qualitative research**

Dimensions	Biography	Phenomenology	Grounded theory	Ethnography	Case study
Focus	Exploring the life of an individual	Understanding the essence of experiences about a phenomenon	Developing a theory grounded in data from the field	Describing and interpreting a cultural and social group	Developing an in-depth analysis of a single case or multiple cases
Discipline origin	Anthropology Literature History Psychology Sociology	Philosophy Sociology Psychology	Sociology	Cultural anthropology Sociology	Political science Sociology Evaluation Urban studies Other social sciences
Data collection	Primary interviews and documents	Long interviews with up to 10 people	Interview with 20-30 individuals to "saturate" categories and detail a theory	Primary observations and interviews with additional artefacts during an extended time in the field (e.g. 6 months to a year)	Multiple sources – documents, archival records, interviews, observations, physical artefacts
Data analysis	Stories Epiphanies Historical content	Statements Meanings Meaning themes General description of the experience	Open coding Axial coding Selective coding Conditional matrix	Description Analysis Interpretation	Description Themes Assertions
Narrative form	Detailed picture of an individual's life	Description of the "essence" of the experience	Theory or theoretical model	Description of the cultural behaviour of a group or an individual	In-depth study of a "case" or "cases"

Source: Creswell 1997 page 65.

Furthermore, Yin (2002) states three conditions used to justify methods of inquiry in each research project. The three conditions are:

- The type of research question;

- The control an investigator or researcher has over actual behavioural events;
- The focus on contemporary as opposed to historical phenomena.

Yin (2002) also declares common research strategies: experiment, survey, archival analysis, history, and case study. When these are compared with the five traditions of Creswell (1997), some are similar; the others are not. It should be noted that Creswell (1997) discusses only qualitative research design, but Yin (2002) does not classify the case study as a purely qualitative methodology. He claims that, in using a case study as a research strategy, the researcher is not limited in the method of data collection employed (Yin 2002).

**Table 4.4: Relevant situations of research strategy**

<b>Strategy</b>	<b>Form of research question</b>	<b>Requires control of behavioural events?</b>	<b>Focuses on contemporary Events?</b>
Experiment	How, why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Archival analysis	Who, what, where, how many, how much	No	Yes/no
History	How, why	No	No
Case study	How, why	No	Yes

Source: Yin 2002 page 5

Based on the explanations above, case study could be seen as the most appropriate method of inquiry for this research as this research aims at provide better understanding of how the decision-makers utilise resources to support their decision-making from in-depth analysis of multiple cases from multiple sources. Moreover, it is also because of the questions of this research was formulated in the forms of what and how questions with no control require of behavioural events. Now it is time to discuss further, what a case study actually is. Some authors view the case study as a methodology (Merriam 1988); some consider the case as an object of study (Stake 1995); some say it is a research strategy (Yin 2002). Creswell

(1997) defines a case study as “an exploration of a ‘bounded system’ or a case (or multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context”. The bounded system is bound by time and place, and the case(s) being studied. This research was conducted in three organisations: NY Sugar, Siam City Cement, and Olympic. Multiple sources of information include observations, interviews, audio-visual materials, documents, and reports. The context of each case involves situating the case within its setting, which may be a physical setting or the social, historical, and/or economical setting for the case. In this thesis, the context setting is B2B organisations.

Stake (1995) states that cases can be selected by the focus of the case: intrinsic case study is chosen by its uniqueness; an instrumental case study means the case is used instrumentally to illustrate the issue, but when more than one case is studied, it is called a collective case study (Stake 1995). Bryman (2001b), however, classifies case studies into three different types based on issues of external validity. The three types are the critical case study, unique case study, and revelatory case study. The researcher employing a critical case study has a clearly specified hypothesis and the case is chosen on the grounds that it will allow better understanding of the circumstances in which the hypothesis will or will not hold. A unique case study is as its name suggests an extreme case. This type is similar to the intrinsic case study defined by Stake (1995). A revelatory case study is when a researcher has an opportunity to observe and analyse a phenomenon previously inaccessible to scientific investigation (Yin 1981). In this research, case studies will be employed as instruments to illustrate the research issue in order to provide a better understanding of the decision-makers’ utilisation of resources.

In addition, Yin (2002) suggests three conventional prejudices against the case study that are worth discussion here. He states that the greatest concern perhaps has been over the lack of rigour of case study research. “Too many times, the researcher has been sloppy, has not followed systematic procedures or has allowed equivocal evidence or biased views to influence the direction of the findings and conclusion” (Yin 2002: 3-5). An appropriate research design and researcher discipline could be a way to overcome this problem. The second concern regards scientific

generalisation (Eisenhardt 1989a; Yin 2002: 3-5). “How can you generalise from a single case” or even two, three or four cases? That is the question that the researcher who employs the case study faces. The answer is in doing case study, the researcher’s goal will be to expand and generalise theories, which is called “analytic generalisation” and is similar to the experimental research that most scientists conduct, and not to enumerate frequencies, which is known as “statistical generalisation” (Yin 2002: 3-5). He also reveals another frequent complaint, which is that a “case study takes too long and the results are massive unreadable documents”. This may have been appropriate in the past, but it is not necessarily true in every research project (Yin 2002: 3-5) as if research has been well designed and planned, the results can be well written and understandable. Despite these three common criticisms, the greatest advantage of using a case study is “its premise researcher to reveal the way a multiplicity of factors has interacted to produce the unique character of the entity” (Thomas 2003: 35). The researcher could use a case study to explore and understand factors that affect each individual, group, or organisation examined.

#### **4.3 The overall research design**

Despite the fact that Yin (2002), Creswell (1997; 2002) and other authors (e.g. Carson *et al.* 2001; Malhotra *et al.* 2003; Mariampolski 2001) have classified case-based research as research methodology, research design or research strategy; it has been shown to be the most appropriate approach for completion of this research. Considering the nature of this research and its aims, the use of case studies allows the researcher to acquire rich data for each case, which assists the researcher to explain and understand the behaviours and interactions of decision-makers. Additionally, case study also helps in describing intervention and the real-life context in which the research was conducted. It also provides the ability to explore the situations in which the intervention being evaluated has not been clarified. It also provides flexibility for the researcher to adapt the strategy used as a result of changes in knowledge, especially when an innovative idea occurs.

The pragmatic aspects of the way this research was conducted will also offer clear reasons and arguments for the manner in which the researcher

carried out the research. Carson *et al.* (2001: 94) suggested that after identifying the research issues, unit of analysis, or what constitutes a case should be considered. They add that deciding on the unit of analysis can sometimes be a confusing process, and finalising it often requires some long discussions with colleagues. The unit of analysis of this research is obvious to a certain extent, as it focuses on how marketing decision-makers utilise their resources in supporting their B2B decision-making. The unit of analysis of this study is, therefore, individuals who directly or indirectly deal with marketing decisions and who can be divided into three groups: users, integrators, and providers as defined in chapter 1. The analyses of individuals could be called embedded cases as they are embedded in the larger unit of analysis namely, B2B organisations. In this thesis, these are NY sugar, Siam City Cement and Olympic. It is important that each embedded case must be considered and compared with the other embedded parts of the same large case, before the large cases can be compared (Carson *et al.* 2001). Thus, the analyses within cases are then performed and presented in chapters 5, 6 and 7, and after that, the cross-case analysis follows in chapter 8.

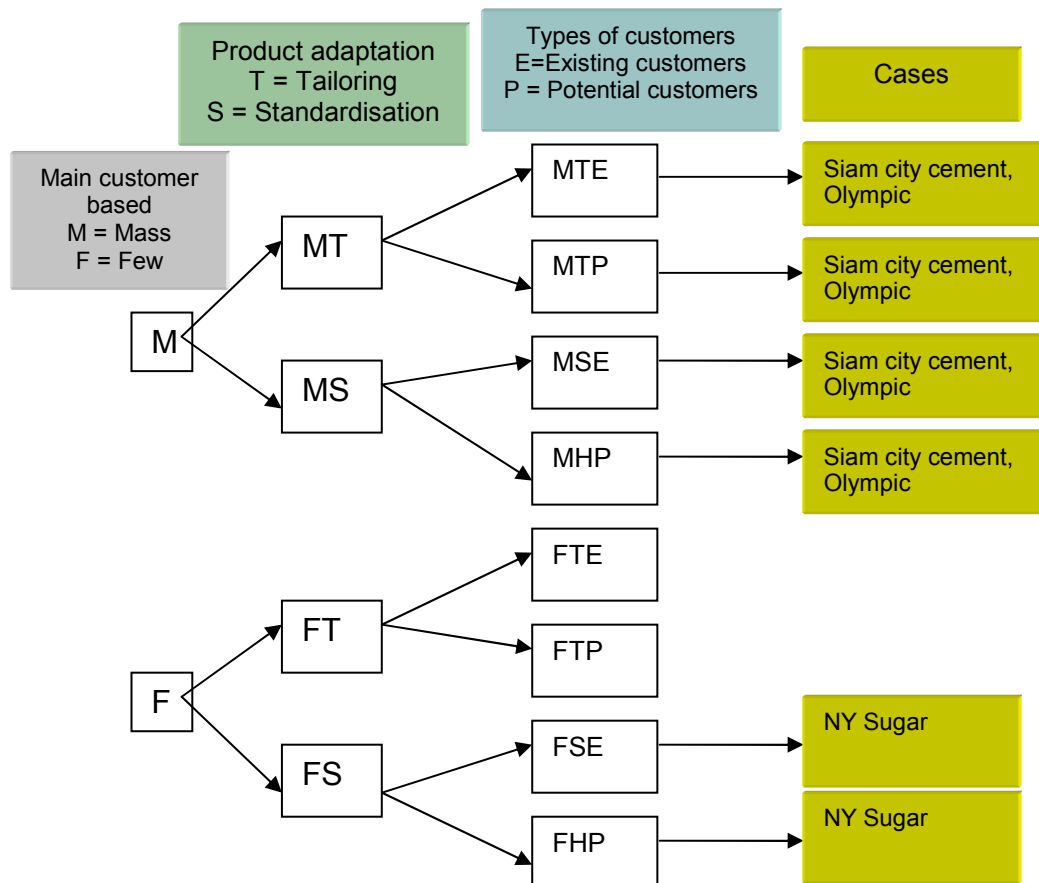
#### **4.3.1 Case selection strategy**

As many B2B organisations exist in the world, it is difficult to justify which organisations will be selected as cases for this study. As stated previously, cases were used as an instrument to illustrate and provide a better understanding of the way decision-makers utilise resources to support their decision-making. In order to reach the research objectives, cases were selected from B2B organisations that have a high possibility of obtaining access, and meet three main criteria: according to whether they are customer-based, use production adaptation, and the types of customers they have.

As illustrated in figure 4.3, an organisation could have either mass or few customer-bases i.e. number of customers that the organisation targets in each group. Production adaptation could be either tailoring or standardising products offered to the customers, in many cases a company could offer both to their customers, for example, Siam City Cement offers specialist cement to some contractors and provides standard products e.g. mixed cement to retailers. The types of customers can be classified into

two types: existing customers and potential customers, in an organisation, both types of customers could exist. Based on these three criteria, many B2B organisations that fall into each group, for example, Proctor & Gamble and Unilever could be classified into MSE and MSP, while Airbus is in FTE and FTP. These famous companies could have been selected as cases for this study, yet, one more important factor influence cases selection is accessing. Many authors have written on challenges of gaining access to the desired companies especially the B2B organisations (e.g. Block & Block 2005; Malhotra *et al.* 2003; McNeil 2005).

**Figure 4.3: Case selection**



Hence, ease of access is the main factor as it could be a major constraint in completion of this study. Thai B2B organisations were selected as it is relatively easier to gain permissions through researcher's personal relationships. Cases were then selected from Thai B2B organisations, which meet the three criteria and which agreed to be cases for this study.

Narrowing down to Thai organisations may raise questions on generalisation, although cases will be used as instruments to investigate and provide the better understanding, it would be accounted as one of the limitations of this study. The selected three cases are: NY Sugar, Siam City Cement and Olympic, and they were fitted in the three criteria and access was granted. Three interviews of the Siam City Cement were initially conducted and used as pilot study presenting in chapter 3. The results suggested that the three cases would illustrate how factors presented in chapters 2 and 3 affect the way decision-makers utilise their resources. In addition, as shown in the figure 4.3, there is no the organisation that has few customers, and tailoring their products to fit their customers' demand was selected as a case in this research due to the fact it was difficult to gain the permission to conduct the research. Even though the three cases do not represent all the B2B organisations, they are a useful instrument to provide a better understanding on ways decision-makers utilise resources to support their decision-making as well as assist in identifying factors that influence the resources utilisations.

#### **4.3.2 Gaining access**

In general, gaining access to any organisation is considered difficult and it is more difficult for international students to gain access to organisations in the UK. Thai organisations came into mind, as they provided greater ease of access and the three cases were selected. Gaining access to each case was slightly different, but all was on the basis of personal connections. In the case of NY Sugar, permission was obtained through a researcher's friend, as she is the daughter of the owner. The process of gaining access to NY sugar was started by telephoning the friend, and asking her to contact her brother who is currently responsible for the company; a meeting with the owner was then arranged. After the meeting, he granted the permission to use the company as a case study as well as arranging the appointment for the interview with the respondent.

Similar steps were applied when contacting Siam City Cement and Olympic: contact initially was through telephone calls and e-mails. A long-term relationship between the researcher's family and these companies allowed the researcher to gain the access to these organisations, giving the researcher the opportunity to interview top management in Siam City

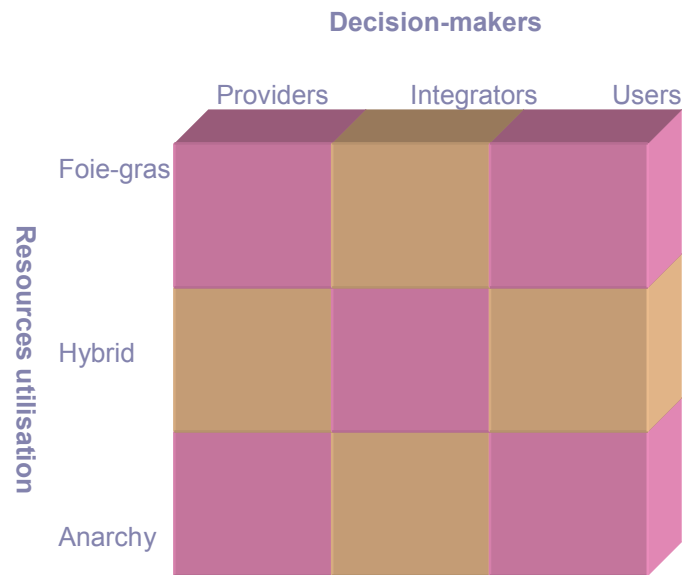


Cement and also one of the owners of Olympic. It appears to have been relatively easy, however, it was not as smooth as it seems due to the facts that top management were very busy at that time, salespersons were mostly away to visit customers across the country, and analysts were away for data collection. As a result, data collection was delayed by almost six months, not including the first pilot interviews. Each case began with the top management or the owners who have authority to give permission for access, and then s/he would allocate a person to take care of the researcher and arrange interviews with others in the organisation. All in all, exercising of the researcher relationships was the main influence in gaining the permission to use the companies as the case study of this study.

#### **4.3.3 Respondent selection strategy**

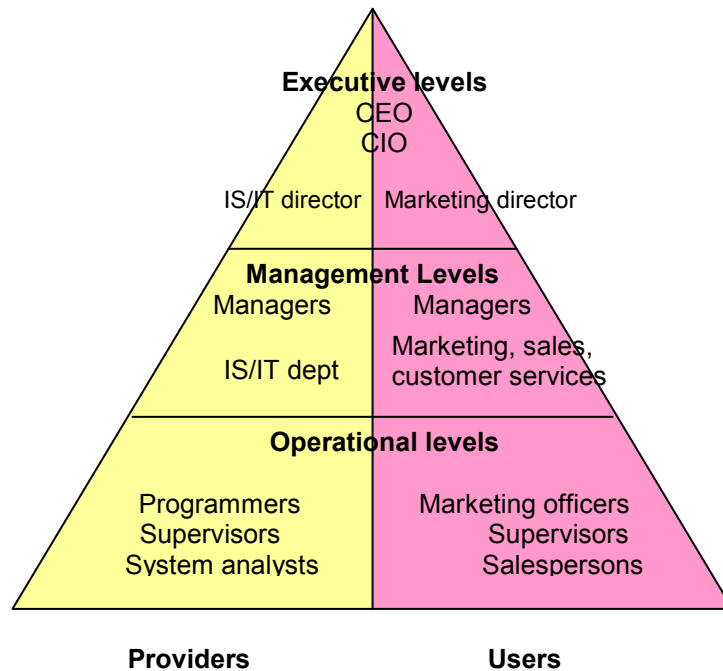
In accordance with the emphasis of the research and the conceptual framework, the unit of analysis of this study is the decision-makers who deal with marketing activities in B2B organisations. They may have different backgrounds, responsibilities, positions, and work in different industries. That is to say, in each case study, one or more individuals who deal with marketing decisions were selected as participants of this thesis. As presented in section 4.3.1, three B2B organisations were selected as larger units of analysis and then the individual respondents were chosen from each organisation based on their responsibilities, position, and referral from the previous respondents. In an organisation, three groups of decision-makers: providers, users, and integrators (see figure 4.4) were the target respondents for this research. Providers are those who control the resources, but do not perform activities such as system designers, system analysts, and programmers. Users, such as marketing managers, administrators, and marketing officers, are those who do not provide resources, but have permission to access and use resources to perform activities. Integrators are those who may provide resources, and are entitled to retrieve and use resources to perform activities.

**Figure 4.4: Decision-making vs. Resources utilisation**



The target respondents were selected from the executive, management, and operation levels of the three groups (see figure 4.5). At the executive level, the respondents could be the marketing director, chief executive officers (CEO), chief information officer (CIO), or the owner. At the management level, respondents could be marketing managers, customer relation managers, sales managers, IT or information system managers. The last group was drawn from the operational level: the supervisors, marketing officers, salespersons, system analysts, and programmers. Within an organisation, therefore, many respondents were selected initially on the basis of their position from the list provided by the companies and some were selected as the previous interviewees suggested; this is called the snowball or chain method of sampling (Bryman 2001b: 325; Miles & Huberman 1994: 28). Miles *et al.* (1994: 28) state that the purpose of using the snowball method is to “identify cases of interest from people who know people who know what cases are information-rich.” In this research, it was employed in order to identify respondents from the previous ones who know who would be suitable respondents in terms of helping to illustrate the ways decision-makers utilise resources in supporting their decision-making.

**Figure 4.5: Target respondents**



This research has 44 participants in total being one from NY Sugar, 23 from Siam City Cement, and 20 from Olympic. As stated three interviewees from Siam City Cement were used as pilot study; yet when conducting the proper study, the 23 respondents were interviewed or re-interviewed in case if s/he was involved in the pilot study. The list of the respondents is attached to this thesis in the appendix A. The respondents were selected from the three different levels, having various backgrounds and responsibilities in the three cases, which will be discussed in more detail later on when presenting case evidence in chapters 5, 6 and 7. Remark that only one respondent was interviewed in NY Sugar case because the others were asked, but refused. The NY sugar was not deleted from this thesis as it would be a good example to illustrate how decision-makers utilise the available resources in a different industry (the other two are in construction industry), having totally different kinds of resources. Including the NY Sugar in the study is thus assisting the researcher to provide better insights of the findings.

#### 4.4 Data collection process

As stated earlier, the qualitative approach was considered to be the most appropriate approach. The data required for completion of this research is mainly qualitative data. By its nature, the qualitative data allows the researcher to obtain richness of detail, explanation, and reasons for what, how and why the respondents act. In addition to this, considering the nature of this study in order to provide a better understanding rather than just give a reflection of causalities or frequencies, more explanations and descriptions were required. It is time to describe in more detail how the data collection process was undertaken. The data collection process actually started with collecting relevant literature in order to develop a framework. Primary data were then initially gathered by means of pilot interviews to ensure that the interview issues are valid. In-depth interviews were mainly employed to obtain the primary data from the respondents and other sources such as documents, reports, journals<sup>8</sup>, and government publications. Table 4.5 illustrates the reasons for using these techniques to gather the required data.

**Table 4.5: Reasons to use in-depth interviews**

Nature of this study	Reasons for using these techniques
1. This research aims to investigate and understand the interaction between actors and resources utilisation to obtain required decision-support.	<ul style="list-style-type: none"><li>• In-depth interviews are more flexible in terms of questioning and is a more appropriate means of gathering sensitive data and discovering innovative information</li></ul>
2. This research requires mostly qualitative data some of which could be classified as confidential data	<ul style="list-style-type: none"><li>• In-depth interview and observation provide a higher chance of obtaining this information.</li></ul>

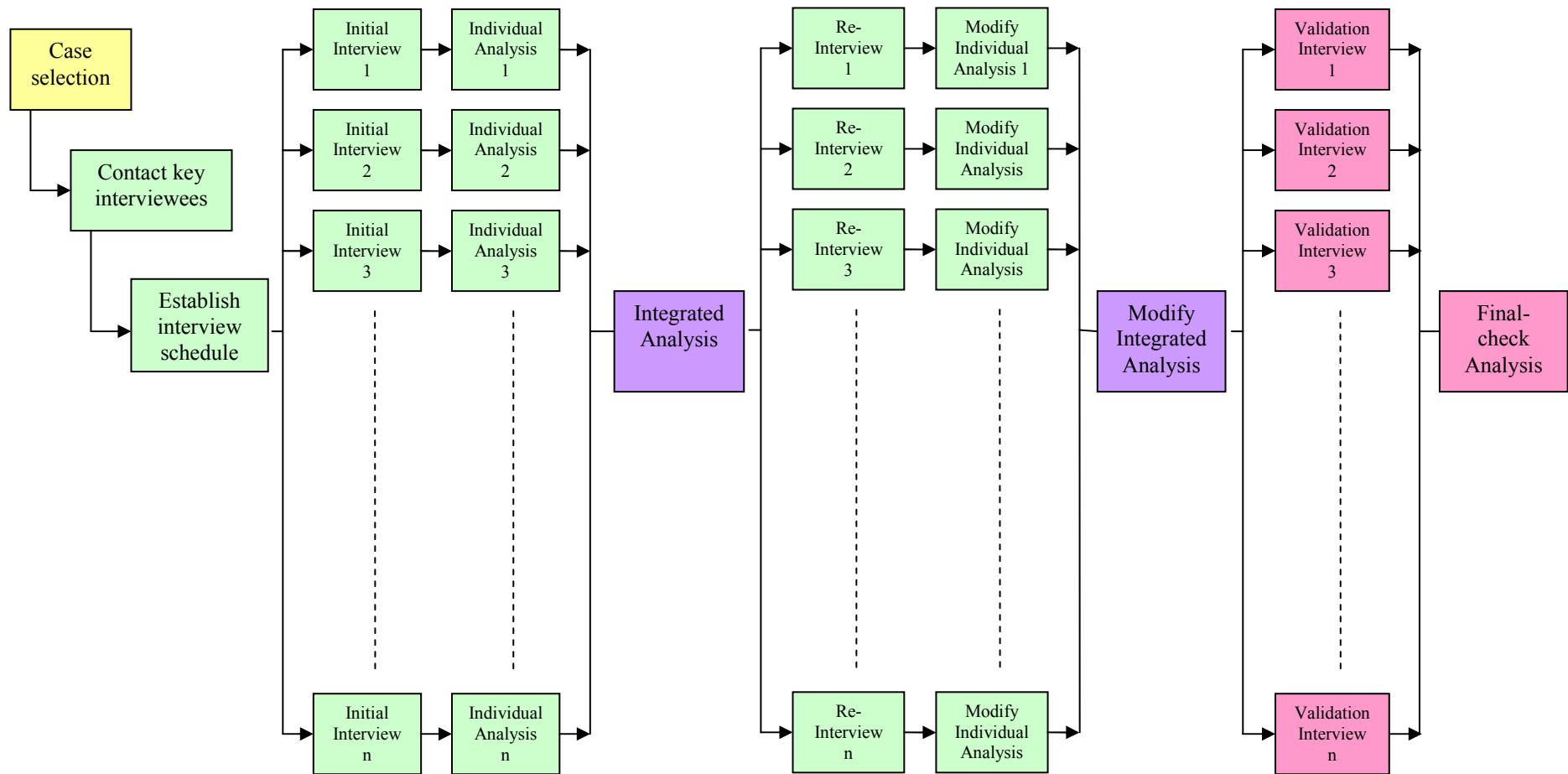
In addition to the reasons presented in table 5, the in-depth interview has general advantages in itself. As Malhotra *et al.* (2003: 182) suggested one of its advantages over other techniques is that it allows the researcher to uncover insights of greater depth. It is also easier to arrange than other techniques are, especially when using a focus group as there are not so many individuals to coordinate and the interviewer can travel to the respondents. Malhotra *et al.* (2003: 182), however, also identified three

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<sup>8</sup> Journals is referring to documents published by private organisations not the academic journals

challenges that researchers face when using the interview as an inquiry technique. The challenges given by Malhotra *et al.* (2003) are as follows:

- The lack of structure makes the results susceptible to the interviewer's influence, and the quality and completeness of the results depend heavily on the interviewer's skills.
- The length of the interview combined with high costs means the number of interviews in a project tends to be few. The quality of research using interviews can be measured by the "quality that the respondent possesses in terms of richness of experience and how relevant their experiences are to the study; quality of drawing out and getting respondents to express themselves clearly and honestly; and the quality of analysis in terms of interpretation of individual respondents and individual issues evaluated across all the interviews conducted" (Malhotra *et al.* 2003: 183). This means the quality of the interviews are not related to the number of interviews, but are concerned with the data obtained from the respondents and the way the data were analysed and interpreted.
- The data obtained can be difficult to analyse and interpret.



**Figure 4.6: Ideal Research Procedure**

Source: Adapted from Hulbert, Farley, & Howard 1972 page 75-77

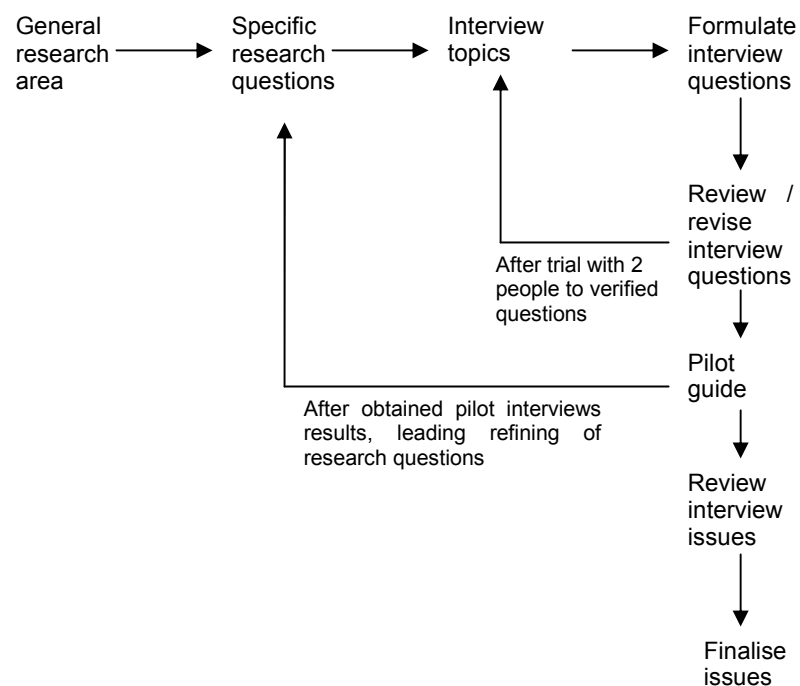
In order to deal with the above challenges, the procedures for the interviews were planned (See figure 4.6). Interview guides were also developed and used in the pilot interviews. As discussed in chapter 3, the first sets of the interview guides were found not to apply to every respondent, although three different sets of questions were formulated to match each group: users, providers and integrators. A new interview guide was formulated which did not use question forms, but used a list of issues that should be addressed during the interviews (See table 4.6).

The steps in formulating the issues are illustrated in the figure 4.7. As can be seen, the process of formulating the guide started with the general research area, then the research questions in order to identify the interview topics. This research followed these steps. The first set of questions was developed to use as an interview guide that applied to all the interviews. After testing the guide with two people: a lecturer and a PhD student in School of Management who used to work in the role of user and provider, the results, however, showed that the guide was not applicable to both people. The questions were revised and as a result, three different sets of questions were formulated and used in the pilot interviews. After the pilot interviews, the results showed that questions were not really applicable to all respondents whether, they are users, integrators or providers because each individual has different responsibilities and roles; the details were different from one another. An interview guide that stated only issues to be addressed during the interviews was finally formulated to ensure fair and similar questions were asked and also to make sure that comparable data was obtained from each respondent (See table 4.6).

The research procedures illustrated in figure 4.6 refer to the ideal processes that were employed to collect the data. As can be seen, the procedures started with case selection, and then the key interviewees were contacted asking for permission to use their organisations as cases in this research. After obtaining permission, interview schedules were established initially with several respondents recommended by the key interviewees. The other respondents were selected using the snowball method. Ideally, the interviews would have been conducted as presented in the figure 4.6; each interviewee would have been investigated with an initial interview,

which was then followed with a re-interview, and finally a validation interview. The actual process, however, was that only one or two interviews were conducted with each respondent due to their limited available times and each interview lasted from 30 minutes to three hours. It was, therefore, difficult to go back and re-interview. Conversations during the interviews were digitally recorded using minidisks, as they can record for a longer time than cassettes, they provide better quality and it is easy to find each interview using folder names. After finishing each set of interviews, an integrated analysis was performed roughly to ensure that all required data and information were obtained. If there was some missing data, the second interviews were scheduled and conducted. The reason for recording the interviews was not only ease of managing the data, but also it provides a record of the way the respondents expressed themselves. When conducting this research, all interviews except one were recorded as the respondent did not agree to be recorded. The others were recorded and transcribed by the researcher. For the unrecorded interview, detailed notes were taken in order to ensure a similar quality of data was obtained.

**Figure 4.7: Formulating an interview guide**



Source: Adapted from Bryman 2001b page 319.



A questionnaire was also employed to obtain personal information and some quantified answers such as “How many customers do you have?” and “How many years have you worked in this organisation?” The questionnaire is in the appendices. The questionnaire was used to ask the respondents about such issues as it took less time than asking them during the interviews. They sometimes returned the questionnaire days after the interview as they had had no time to answer the questions earlier. The questionnaire was also employed in order to gather respondents’ biographical data.

#### 4.4.1 Issues to address

Table 6 illustrates issues to be addressed during the interviews and their objectives. The issues were developed according to the steps presented in the previous section (see figure 4.7) and used as a guide for the researcher to ensure that the interviews were conducted fairly and the data would be comparative for each interview. As stated in the early chapter, B2B-related factors are the main factors in this study; however, table 4.6 also includes issues related to other factors identified from literature in order to assist the research when these factors emerged during the interviews. Examples of questions used in the interviews are presented in appendix B, both in English and Thai.

**Table 4.6: Issues to address and their objectives**

Issues	Objectives
<b>Individual and interpersonal related</b> <ul style="list-style-type: none"> <li>▪ Decision areas/ responsibilities</li> <li>▪ Objectives and goals of organisation</li> <li>▪ Existing IT/IS/Applications in the organisation – how the respondent interacts with them</li> <li>▪ Types of support – expected and accepted</li> <li>▪ Limitations of gathering support</li> <li>▪ Style of decision-making</li> <li>▪ Complete direction</li> <li>▪ Partial direction</li> </ul>	<ul style="list-style-type: none"> <li>▪ To gather individual and interpersonal data</li> <li>▪ To explore and understand attitude of the individuals towards gathering and generating decision-support.</li> </ul>

<ul style="list-style-type: none"> <li>▪ Scope of work, work individually</li> <li>▪ Problem-solving style</li> <li>▪ Directive</li> <li>▪ Analytical</li> <li>▪ Conceptual</li> <li>▪ Behavioural</li> <li>▪ Skills/expertise</li> <li>▪ Education</li> <li>▪ Years of working in this position</li> <li>▪ Length of time working in this organisation</li> <li>▪ Past experiences</li> </ul>	
<p><b>Organisational related</b></p> <ul style="list-style-type: none"> <li>▪ Organisational structure – Mechanic vs. Organic</li> <li>▪ Centralised vs. Decentralised</li> <li>▪ Job rotation or not</li> <li>▪ Existing technology – IS/IT/Application in the organisation – Types of technology</li> <li>▪ Personal and interpersonal conflicts</li> <li>▪ Personal relationships with colleagues, both within and between departments</li> <li>▪ Role of conflicts of interest between departments</li> </ul>	<ul style="list-style-type: none"> <li>▪ To gather organisational data</li> <li>▪ To explore and understand characteristics of the organisation toward gathering 'facts' and generating decision-support.</li> </ul>
<p><b>B2B related</b></p> <ul style="list-style-type: none"> <li>▪ Number of customers vs. value of customers</li> <li>▪ Power of customers to negotiate</li> <li>▪ Treatment of customers – individual or standard</li> <li>▪ Supplier-customer relationship</li> <li>▪ Types of relationships, their effects</li> <li>▪ Degree of integration, its effects</li> <li>▪ Sharing same technology – linked together or not</li> </ul>	<ul style="list-style-type: none"> <li>▪ To gather B2B related data</li> <li>▪ To identify value of customers, supplier-customer relationships, nature of demand, and dominant types of networks in the respondents' perception.</li> <li>▪ To explore and determine potential B2B related factors that may shape resources utilisation.</li> <li>▪ To explore and understand how B2B related factors influence the ways decision-makers utilise</li> </ul>

<ul style="list-style-type: none"> <li>▪ Nature of demand for products or services</li> <li>▪ Influence by either customers or end-users</li> <li>▪ Product adaptation</li> <li>▪ Ways of gathering information about end-users &amp; customers</li> <li>▪ Dominant types of networks</li> <li>▪ Supplier or distribution network</li> <li>▪ How to control and manage SC and its effects</li> </ul>	<p>resources to generate decision-support.</p>
<p><b>Determination of foie-gras or Anarchy / degree of hybrid</b></p> <ul style="list-style-type: none"> <li>▪ Ways of gathering 'facts' to support decision-making – preferred/ideal</li> <li>▪ Resources provided in the organisations</li> <li>▪ Have the respondent gathered some 'facts' by themselves &amp; give example</li> <li>▪ Existing databases, IS, applications provided in organisations – use or not, how and why</li> <li>▪ Marketing research, customer feedback – how are the respondents dealing with the information?</li> </ul>	<ul style="list-style-type: none"> <li>▪ To understand how the actors utilise resources</li> </ul>

As stated in the previous chapter, B2B related factors are the main focus of this study, while questions on the other groups of factors may be asked if times available and the respondents happily answered those questions. The table 4.6 above illustrated issues to address during the interviews and their objectives. Individual and interpersonal related factors and organisational related factors were also questioned to gain general ideas about the respondents as well as their organisations. The information obtained will be used to formulate further questions regarding each respondent's decision-making and their resources utilisation as well as

investigation on B2B factors that may influence their utilisation. In covering all these issues, there were some difficulties. A major challenge that the researcher faced is the respondents' availability in terms of both times and arrangements. Sometimes respondents were called to meetings during the interview; sometimes the researcher was granted too little time to quickly cover all the important issues. Moreover, making appointments with respondents was rather complicated as some respondents especially sales representatives, area managers, and analysts who generally work in upcountry offices, come to headquarters only once a month with full schedules for meetings. The biggest challenge was gathering the required in-depth data as quickly as possible from these people to at least cover all the issues.

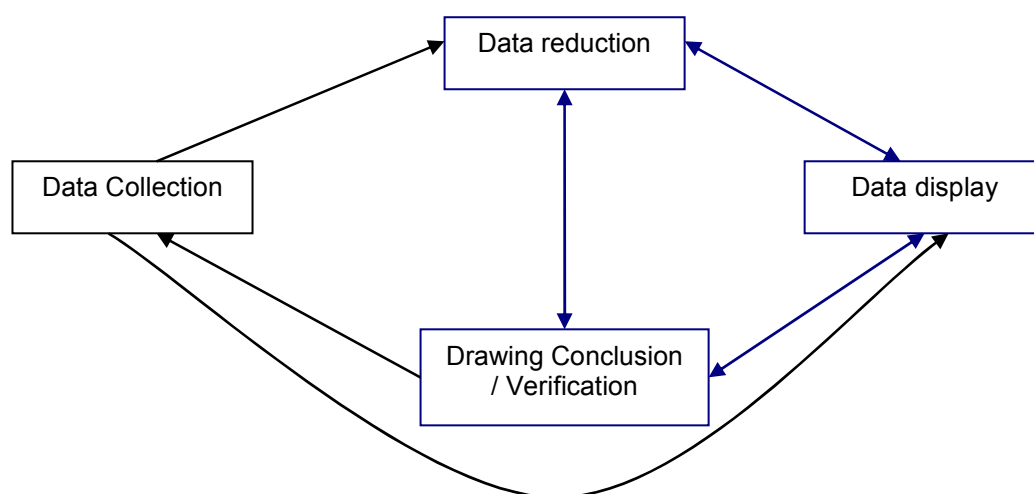
The other major challenge is to encourage respondents to explicitly answer all the questions. The researcher needs to build trust and confidence that the answers would not be exposed to other people as well as to create a relaxed atmosphere when the respondents are feeling nervous, as the interviews were conducted in their offices where other co-workers could hear their answers. In addition, sometimes respondents felt uninclined to answer particular questions; the researcher sometimes needed to change wordings and/or questions to comfort the respondents and continue the interviews. Sometime, the researcher needed to rearrange the flow of questions to match with the information obtained during the interviews. During the interviews, the researcher often has to formulate questions that are not related to the above issues but could influence the resource utilisation based on the conversations with the respondents. Thus, the researcher needed to also have general ideas about other influencers. After each interview, interviews were transcribed and added with notes made during the interviews as a preparation for next step of data analysis.

#### **4.5 Data analysis**

Yin (2002: 109) states that data analysis "consists of examining, categorising, tabulating, testing, or otherwise recombining both quantitative and qualitative evidence to address the initial propositions of a study". Miles *et al.* (1994) however, suggest that data analysis consists of three main processes: data reduction, data display, and conclusion drawing and/or verification. Examining and categorising could be considered as

data reduction; tabulating could be seen as data display; testing and recombining could be included in drawing conclusions and/or verification. Figure 4.8 illustrates how the data analysis process interacted with data collection process. The blue arrows represent the steps of data analysis which can be revisited at anytime, while the black arrows show the links between the data collection and data analysis. After collection, data undergoes the reduction process, then data display, and finally verification or drawing conclusions from the data takes place. The process is not as linear as it seems. In each step, the researcher may have to go back and collect some more relevant data to obtain the best conclusion as shown in the figure. Sometime after data were collected, it can pass through the display process. Sometime after the data has gone through all the processes, the researcher may have to re-collect data either to verify or to obtain more detail in order to draw conclusions. This research used a similar process to analyse and interpret the data obtained. As illustrated in figure 4.6, after each set of interviews was finished, analyses were conducted to ensure that all the data required were obtained and this was often enough to illustrate the ways decision-makers utilise their resources. If it was not enough, the second interview was scheduled in order to obtain the missing data. In this study, only two interviewees had second interviews. These two people's first interviews were conducted as pilot interviews; therefore, the data obtained from the first interviews were not enough for analysis. The second interviews were conducted in the same period as the other respondents in the similar manner.

**Figure 4.8: Data Analysis Components**



Source: Miles *et al.* 1994

As this research is case-based research, multiple sources of evidence were collected as data including documents, journals, interviews and questionnaires. In order to analyse these data, Yin (2002) suggests three “general analytic strategies” and five “specific techniques”. The three general analytic strategies are “relying on theoretical propositions, setting up a framework based on rival explanations, and developing case descriptions” (Yin 2002: 109). The first strategy applies when theoretical propositions have been developed *a priori* and the analysis is performed to follow the theoretical propositions. In this research, theoretical propositions were developed as presented in chapters 2 and 3; the analysis was therefore conducted against the propositions and the conceptual framework. The theoretical propositions were also associated with the data collection plan. The analysis gave priority to the relevant analytic strategies; that is to say, data related to factors that had been pre-identified in the conceptual framework were concentrated on in the early analysis.

The data related to other factors were analysed later using another strategy called “thinking about rival explanations” (Yin 2002: 110). Yin explains that rival explanations consist of craft rivals and real-life rivals. The craft rivals: the null hypothesis, threats to validity, and investigator bias, are common and have been drawn attention in many books including Yin (2002) and Miles *et al.* (1994). In contrast, real-life rivals are not much mentioned (Yin 2002). Real-life rivals consist of direct rivals; commingle rivals, implementation rivals, rival theories, super rivals, and society rivals (Yin 2002). Direct rivals are simply other influences that have not been mentioned in the propositions. Commingle rivals are other influences that may have an effect on the results if combined with other influences. Implementation rivals are those influences on the implementation process accounted in the results. A rival theory refers to a theory which is different from the original theory and which can explain the results better. A force larger than but including the intervention accounts for the results is called a super rival. The society rival is the society trends that could account for the results. Yin (2002) adds that the researcher should have been careful to identify these rivals prior to the data collection. These rivals were considered and identified at the start of this research as presented in the previous section. For instance, case selection strategy and method of respondent selection were illustrated that the threats to validity had been

addressed. Some direct rivals were found during the data collection period, for example, other factors apart from those pre-identified that could influence the way decision-makers utilise resources, which will be discussed and presented in chapter 8.

The third general analytic is “developing a case description” (Yin 2002). Yin (2002) suggests that this strategy is less preferable than the others are, but it is useful as an alternative. The researcher could use it to identify the appropriate casual links to be analysed. In this research, this analytic strategy was also employed, for example, to identify the embedded unit of analysis, to explain the complexity of how the factors influence the resources utilisation of the decision-makers. In sum, all three general analytic strategies were employed in the analysis the data for the completion of this research, but the main one is the first strategy, relying on theoretical propositions. The other strategies were used as alternatives.

As presented before, Yin (2002) suggests five specific techniques, namely, pattern matching, explanation building, time-series analysis, logic models, and cross-case synthesis<sup>9</sup>. These techniques are intended to deal with the problems of internal validity and external validity in doing case studies which will be discussed later in this chapter. Any research could employ more than one technique to analyse the data; logic models and cross-case synthesis were used to analyse the data in this study. Logic models have been increasingly useful in recent years (Yin 2002). Using the logic models as an analytical technique involved “matching the observed events to theoretical predicted events” (Yin 2002), therefore it could be considered as another form of pattern matching. In this research, the data was analysed against the conceptual framework illustrated in chapter 3. Therefore, four types of logic models, namely, an individual-level logic model, organisational-level logic model, an alternative configuration for an organisational-level logic model, and program-level logic model. They vary according to the unit of analysis. In this research, the organisational-level logic model was mainly employed, but the individual-level logic model was also used for embedded units of analysis, i.e., each respondent. After each

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<sup>9</sup> Definition and further details of each technique were presented in “Case Study Research: design and methods” third edition by Yin (2002) pp. 116-137.

case was analysed and interpreted, a cross-case synthesis was employed to aggregate results across the individual case studies.

Yin (2002) suggests that no matter what strategy or techniques have been employed, the researcher must do everything to ensure that the analysis is of the highest quality. He offers four principles underlying all good social science research which require attention from the researcher. The four principles are listed below:

- The researcher should show that all the evidence has been attended;
- All major rival interpretations should be addressed;
- The most significant aspect of the case studies should also be addressed;
- The researcher's prior and expert knowledge should be employed in the study.

As described in the data collection section, interviews were digitally recorded and transcribed into rich text format (RTF) files in order to be compatible with the computer software, NVIVO. NVIVO is computer-assisted qualitative data analysis software (CAQDAS). CAQDAS has been developed since the 1980s and initially the software consists of "rather intimidating programmes, based on command line interfaced" (Gibbs 2002: 10). It has now been developed to take full advantage of the windows, menus, and icons of modern operating systems. Gibbs (2002) discussed the advantages of using the CAQDAS as a tool in data analysis claiming that it can make qualitative analysis easier, more accurate, more reliable, and more transparent. Although it offers many benefits, using such software could be dangerous too. The first danger to be aware of is "a feeling of being distant from the data" (Gibbs 2002), this may be caused by difficulties especially when researcher does not know how to use the software and/or does not understand the ability of the software. This happened in the early stage of the analysis in this research learning how to use NVIVO was not too difficult, but took time. Another issue discussed by Gibbs (2002: 12) is that "much software influenced by grounded theory" including NVIVO. He, however, adds that "as programmes have become more sophisticated, they become less connected to any one analytic approach". Another danger point is the overemphasis on code-and-retrieve



approaches, which is the core activity of NVIVO. The researcher, therefore, has to ensure that in order to achieve a good quality of research, the NVIVO or any other CAQDAS is only “a tool for analysis and good qualitative analysis still relies on good analytic work by a careful human researcher” (Gibbs 2002: 12)

Since its first development, in 1980s, five types of CAQDAS now exist as listed (Weitzman & Miles 1995):

- Text retrievers – search for words and phrases
- Text base managers – sort and organise data
- Code and retrieve – support coding and reporting by codes
- Code-based theory builders – coding and the ability to build conceptual structures and test hypotheses
- Conceptual network builder – diagrams, concept mapping, charts.

NVIVO falls in the code-based theory builders as it assists the researcher in coding, building conceptual structures, and testing hypotheses. Despite the wide range of abilities of NVIVO, in this research, it was employed as a tool to assist research mainly in coding and retrieving data.

#### **4.4.1 Data reduction**

After all the interviews were transcribed; the transcriptions<sup>10</sup> were written-up and typed into RTF files and stored as a part of an NVIVO project called PhD Thesis. The data reduction started with the transcriptions being themed and coded. In other words, they were put into nodes, trees, sets, and attributes using NVIVO. The purpose of coding data is to reduce and organise it to obtain the relevant data. All files were named and described according to individuals' details such as the organisations' name, their position, and the types of respondents. As stated before, this research employed “relying on theoretical propositions” as a main analytic strategy and the logic models analytic technique. The coding process was started with creating nodes, which were named initially by factors pre-identified in the conceptual framework. After that, trees and sets were created to group nodes together. For the other factors which were not pre-identified, where “rival explanations” were used as an analytic strategy, nodes were named

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<sup>10</sup> Transcriptions were conducted in Thai as the interviews were conducted in Thai, but if the respondents answered in English, the transcriptions were, remain in English.

by common words or phrases, and used consistently throughout the coding process. Each transcription was coded one by one until each case finished, and then revisited to verify the coding using retrieval tools available in NVIVO. As the interviews were conducted mainly in Thai<sup>11</sup>, the coding was done in English in order to match with the conceptual framework and ease of analysis. Nodes or themes that were using in the analysis are attached as appendix C. The data reduction process was revisited several times when attempting to make sense of the data. That is to say, during the process of data display and drawing conclusions and/or verification, data reduction was also retrieved and revised, sometimes to add data, sometimes to edit data.

#### **4.5.2 Making sense of the data**

Although NVIVO provides a helpful function in data management, it is, however, computer software that cannot think by itself. The researcher is the one who analyses and interprets all the data, i.e., make sense of the data. After finishing the data reduction process, i.e., data coding was first completed, the nodes, trees, sets, and attributes were grouped and analysed against the conceptual framework. Other case evidence such as documents and publications were also combined in the analysis as an explanation of why the respondents utilise resources in the ways they do. As illustrated in figure 4.8, the process of data display, and drawing conclusions and/or verification was not completed on just one occasion; it was revisited several times until the analysis and interpretation were completed. In other words, during the writing of the case reports, the researcher revisited all three steps several times until the report was finished.

Although the interviews were conducted in Thai, language barriers were not a problem in analysing and interpreting the data as the researcher is Thai. Although the issues were written in English, but all the questions were asked in Thai as convenience for both respondents and the researcher. After the interviews, transcriptions were finished in Thai from the records and imported to NVIVO to start the analysis. The translation was not required here to avoid the errors that may occur during the translation

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<sup>11</sup> Some respondents answer mostly in Thai mixing with English words or phrases as some English words has been widely used and accepted as Thai words.

process. The nodes or codes were named in English by the researcher who understands both Thai and English. However, the translation did become an important issue when writing the case reports, especially when a quote was needed from the interviews; translation from Thai to English was required. Direct translation needs someone who not only knows both languages but also understand the culture of both. If the translation was done by translators who were not fluent in both pairs and is not familiar with both cultures, then the direct translation of certain words and phrases may be erroneous (Malhotra *et al.* 2003; Zimmerman & Szenberg 2000). Back translations could be employed to eliminate these problems. Back translation is the process that translates the scripts from based language to the target and then re-translates back to the original language (Zimmerman *et al.* 2000). The translation errors could be then identified; however, it can be cumbersome and time-consuming (Zimmerman *et al.* 2000). In this research, the direct translation was employed by the researcher without the back translation as the researcher understands the languages and culture of the respondents. Some errors could have been contained in the translation. For example, a challenge was to keep the translations exactly compatible with respondents' conversations and to convey the same messages the respondents communicated. It was very difficult to direct translate word by word because there are some words that do not exist in English; the closest translations or elaboration may be used to illustrate what the respondents said. For example, in Thai, the word "Num-Chai" literally is translated as "water from heart" and in Thai is used when one person offers help to another without expecting anything in return. This expression does not have any exact translation in English. Another example is "Kreang-Chai". In some sense, it means "respect" or "considerate". However, neither English word gives the exact meaning, if a person says "Kreang-Chai", it usually means s/he respects whatever the others offer to do for or give to her/him. Nonetheless, sometimes it has some other meaning depending on the way or the context of the person speaking. Therefore, making sense of the data to some extent was difficult and may not be perfect as the language was a limitation.

#### **4.6 Limitations of the methodology**

Many strengths and weaknesses of employing qualitative case-based techniques have been presented and justified as the reasons for employing

this research design and methods of inquiry to complete this study. This section will present the limitations of using this methodology in detail. In addition to the limitations, as suggested by many authors (Carson *et al.* 2001; Creswell 2002; Malhotra *et al.* 2003; Miles *et al.* 1994; Verschuren 2003; Yin 2002), the quality of qualitative research should be considered when conducting any research and this can be judged in terms of validities and reliabilities, which will be discussed later in this section.

#### **4.6.1 Limitations**

General limitations of case-based research are concerned with generalisation, lack of rigour, and the fact that it is time consuming and results in a massive amount of data (Eisenhardt 1991; Yin 2002). By following the research design above, lack of rigour should not be a problem in completion of this research. Generalisation as should not be a problem as the aim of this research was not statistical generalisation, but analytical generalisation. This research took time to develop as did gathering and analysing the data. As a PhD thesis, time is limited to three to four years, but for this research, it was enough to complete the research plan. However, time could be considered to be one of the limitations, as if there was no time limitation; this research could be expanded to be more extensive. For example, interviews with other organisations to create repetitions or conduct a confirmation research to confirm that the results could be applied to every organisation by conducting survey research to obtain statistical generalisation.

The researcher's experience could be counted as one of the limitations. As a PhD student who has little experience conducting qualitative research, it has been very difficult to learn to complete case-based research, although, the researcher has knowledge about how to do this, but she cannot be considered as an experienced researcher. However, as in a typical PhD thesis, supervisors who are experienced in using this strategy were very helpful in building up case reports. With little experience in interviewing, the very first interviews did not obtain enough data which led to re-interviews and repetitions of the processes; this is to say it took a longer time to complete the thesis than it could have.

Researcher bias could be another point, previous knowledge of the construction industry led to more confidence in data collection in two cases: Siam city cement and Olympic. It could lead the researcher to miss some important issues that may occur in Siam City Cement and Olympic given that the researcher believed that she knew the situations well. The researcher did not have previous knowledge of the sugar industry and the interview took a longer time to complete, and was conducted with less confidence, i.e., questions sometime were not clear or to the point. During the data analysis, NY sugar transcription was more complicated than the others were as it contained more description on general information about the industry. As an interview guide was used, all respondents were however interviewed in a fair, comparable and similar manner.

Another issue could have been comparability between the three cases as they were unequal number of respondents and working in different environments, however, the differences could assist better illustration on the influences of each factor on the resources utilisation of the actors. Some may raise that only respondent in NY Sugar is a limitation, and yes it is, but in analysing the case, other sources were used including the owners of the company, to support and ensure that information obtained the respondent was trustworthy.

#### **4.6.2 Validities**

Yin (2002) categorises validities into three types, namely, construct validity, internal validity, and external validity. The researcher should bear these three validities in mind when conducting any research, including case-based research. Construct validity is concerned with “establishing correct operational measures for the concepts being studied” (Yin 2002). Case-based research is often criticised for the fact that a case study investigator fails to develop a sufficiently operational set of measures and that subjective judgements are used to collect the data. To ensure that the construct of the case study is valid, Yin (2002) suggests that the researcher should use multiple sources of evidence, establish a chain of evidence, and where possible have key informants review a draft case study report. This research largely followed these suggestions. Multiple sources of evidence were employed including interviews, documents, journal, publications, and reports. All the data were obtained from a variety of sources. The data

were input and linked in the NVIVO project. However, some data, for example, were obtained as a hard copy or as PDF files, and were not compatible with NVIVO. This type of data, therefore, was not included in NVIVO, but was used in data analysis. The link between the data in NVIVO and the data outside NVIVO was done electronically using a similar coding system. The PDF were highlighted and the comments facility available in Adobe Acrobat 7 was used as a tool. The construct validity was engaged mainly in the data collection process.

Internal validity comes into consideration when the research attempts to establish “a casual relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships” (Yin 2002). The researcher has endeavoured to understand the relationship between the factors affecting the resources utilisation of decision-makers and the ways decision-makers actually utilise resources. Identification of the cause-effect relationship was the main objective of this research. The internal validity thus needs to be considered in the data analyse process. Yin (2002) recommends that the researcher should employ at least one of the analytic techniques to address internal validity. As discussed in the data analysis section, pattern matching, explanation building, addressing rival explanations, and logic models were employed to analyse the case evidence.

The external validity problem has been a major barrier in conducting case studies. It is involved with “establishing the domain to which a study’s findings can be generalised” (Yin 2002), i.e., ability to generalise the study. As stated in the research design, this research was conducted to achieve analytic generalisation not statistical generalisation. However, a multiple case study was employed as the research design for this thesis. In order to reiterate the replication logic, this is also shown in the case selection strategy and selection of respondents.

#### **4.6.3 Reliabilities**

Reliability is another test that should be included in any research. Reliability is concerned with “demonstrating that the operations of a study, such as the data collection procedures, can be repeated, with the same results” (Yin 2002). In other words, with the same research design, similar

results should be obtained. Yin (2002) suggests that when collecting data, a case study protocol should be used, and also a case study database should be developed. In this research, the reliability was considered, for example, the interview issues were developed as a case study protocol to use as a researcher guide in data collection.

#### **4.7 Ethical issues**

Research ethics is another significant issue that should be considered when conducting research especially when dealing with human-beings as respondents of the research. Ethical issues are very complicated by their nature and people have different opinion about the manner in which they should be addressed. It is thus important to address the ethical issues in the way this research was conducted, namely informed consent, anonymity, and interview ethics.

##### **4.7.1 Informed consent**

Prior to obtaining the permission to access each organisation, information about this research such as aims, questions, methodology was handed to the top management who have the authority grant permission for access. The information was written in report form, including the background of the study, research issues, objectives, questions, methodology, the research plan and expected results. Then when meeting each respondent, s/he was given brief information about this research including research objectives, research questions, the conceptual framework, interview issues, case selection and the names of organisations which were chosen as cases for this thesis, and expected contributions of this research. Each respondent was also given a written sheet containing a summary of the above information and also the interview issue table. These sheets were given to the respondents at the start of the interviews. The researcher then briefly explained the information regarding the research and the way this research was carried out, for instance, interview procedures, anonymity, and tape recording. General information regarding respondents' responsibilities, positions, and backgrounds was gathered at the start of the interview in order to initiate the further questions and also to become familiar with the respondents.

#### **4.7.2 Anonymity**

During the process of gaining access, organisations were asked to agree to their company names appearing in the thesis. Only the company names were disclosed, the respondents' names would remain confidential and anonymous. They are referred to by fictional names, for example, in the case of NY Sugar, the interviewees are referred to as "intervieweeA1, intervieweeA2, interviewee An", in the case of Siam City Cement, the interviewees are referred to as "intervieweeB1, intervieweeB2, intervieweeBn", similarly, in the case of Olympic, the interviewees are referred to as "intervieweeC1, intervieweeC2, ..., intervieweeCn", where n is equal to the number of respondents in each case. It was planned that roles of each respondent would not be mentioned in the report. However, this is difficult to avoid as it is related to their responsibilities and the decisions they have been making. In the written case study report, the interviewees' roles were thus mentioned as little as possible and only when it could not be avoided. All the respondents were informed about this issue at the start of the interviews, and most of them even gave permission to use their name in the report, but the researcher prefers not do this as it could have effects on their work.

#### **4.7.3 Interview ethics**

As discussed earlier, interviews were the main method of data collection. The interview process was explained to all the respondents prior to the start of the interview. Permission to record the conversation was asked and most of interviewees granted it. Only one did not allow the researcher to record the interview, so careful notes were taken and it took a longer time for the researcher to ensure that all the required data were obtained and written down including the way the respondent answered each question. All interviews were conducted in the respondents' own working space, or a private meeting room in the company. The respondents were thus in a relaxed atmosphere with sufficient privacy. Sometime during the interviews, the researcher was asked to stop recording as the answers were considered to be confidential information. All such information, if it is related to the context of study, was written down as a note and shown to the respondents during the interviews to ensure that they were happy with the notes.



#### **4.8 Dilemmas**

There are many challenges and difficulties the researcher faced when conducting this research. These dilemmas were not derived from outside or environment, but they were originated from the researcher, as I was trained as mathematician, and therefore was an objectivist. Yet, the nature of this research was best fulfilled with interpretivism. I, therefore, decided to complete this research on the basis of interpretivism as discussed above. I have put all my effort into completing this research although it was not my expertise, especially in the stages of data reduction, data analysis and writing-up. The most difficulty I faced was when I wrote this thesis; my writing language may sound like it was conducted as a quantitative research, although it was not. It is caused by my limited English vocabulary. Nevertheless, I have attempted to complete this thesis as a qualitative researcher as much as I can.

#### **4.9 Chapter summary**

In sum, this research was conducted as a case-based research project. Three cases were selected to illustrate the ways the decision-makers utilise the existing resources to support marketing decision-making. The three cases are Siam City Cement Plc. Ltd., Thai Olympic Fibre-Concrete Ltd., and NY Sugar Ltd. These cases are located in Thailand operating in a business-to-business environment and dealing with both Thai/local and foreign customers. These companies, however, either have similar types of resources i.e. SAP in Siam City Cement and Olympic, or have extremely different resources i.e. fragmented databases and SAP in NY sugar and the others. The management styles differ in each case from western style to eastern style, which will be discussed in details later in this thesis when a cross-case analysis is conducted.

Data from each case were collected mainly via interviews, but other resources e.g. company brochures, annual reports, government publications and internal reports were also employed to enrich the information. After obtaining all the required data, transcribing and coding were performed using NVIVO, qualitative data analysis software. Although this research has been conducted with the highest attempts to strengthen the research of the researcher, some limitations remain. Subsequent to

this chapter, the findings of this research will be presented case by case in the next three chapters, and then followed by a cross-case analysis.

## **CHAPTER 5**

### **CASE STUDY: NONG YAI INDUSTRY CO., LTD.**

#### **5.0 Introduction**

As stated in the previous chapter that this thesis gathers evidence from three different cases, of which N.Y. Sugar Co., Ltd. is one. The company is a local Thai sugar-processing mill, which manufactures and sells various types of sugar in both domestic and foreign markets. Customers of the company are those businesses who purchase sugar to serve different purposes e.g. reselling, using as their raw materials or consuming. This chapter illustrates evidence obtained from investigation in NY Sugar on how the actors utilise the existing resources to support their marketing decisions as well as to identify factors that influence the ways they utilise resources. Starting with a brief background of the sugar industry and the company in particular to provides a better picture of the company environment and prepares for analysis later on. It is followed by explanations on its actors, resources, and activities identify these elements existing in the organisation. After that, a discussion on how actors utilise the existing resources in supporting their activities are presented. Factors influence the resources utilisations are then identified. A conclusion is finally drawn from the results of this case investigation.

#### **5.1 Background of NY Sugar**

N.Y. Sugar Co. Ltd., will be recalled as NY Sugar in the rest of the thesis, is a medium-to-large sized independent sugar-processing mill in Thailand (Office of the Cane and Sugar fund 2005), whose sells its products to only business customers in domestic and foreign markets. The company has its head office in Bangkok, while its factory is located in Korn Buri district, Nakornrajasima<sup>12</sup>, Thailand. In 1996, it raised the registered capital to 900 million Baht with the crushing capacity increasing to 18,000 tons cane per day. NY Sugar is a typical family-run business in that most members of the management team are family members and relatives. The company is currently managed by the second generation of the family with the third

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<sup>12</sup> Nakornrajasima is a province in the Northeast of Thailand, the area where most sugar cane is planting.

generation also getting involved. During the period that this research was conducted, the company was at the stage that management authorities are being transferred from the former to the latter. The company has employed over 1,100 people including full-time workers and seasonal workers.

Sugar is one of the most important agricultural products in Thailand after rice and resin (Para rubber) (National Statistical Office 2004). Sugar generates the third highest income for the farmers employing up to 600,000 employees. It produces money circulation of 150,000<sup>13</sup> million Baht per year for the Thai economy (Agricultural ministry of Thailand 2005). Moreover, Thailand plays an important role in supplying sugar to the world market. The evidence for this comes from the Statistical Year Book: forty-eighth issue (UN, 2004). In 1996 - 2002, Thailand exported approximately 70 percent of its sugar production to the world market, which is over 40 million tons a year (Biz Dimension Co. 2005a). Thailand currently ranks as the fifth largest global sugar producer after Brazil, India, China, and Mexico (Biz Dimension Co. 2005b). The consumption of the domestic market is stable, around 28-31 kilograms per capita a year (Office of the Cane and Sugar fund 2005). With the relatively small internal needs and low transportation costs, especially to growing regional markets, the Thai government policy of maintaining high domestic sugar prices has supported increased production, dampened growth in use and increased exportable surpluses. Thai government encouraged production for export by passing a law, the Sugar Cane and Sugar Act, to control domestic sugar prices and export quotas in 1984 (Office of the Cane and Sugar Board 2005). Thus, Thai sugar industry can be divided into two parts: domestic and foreign markets.

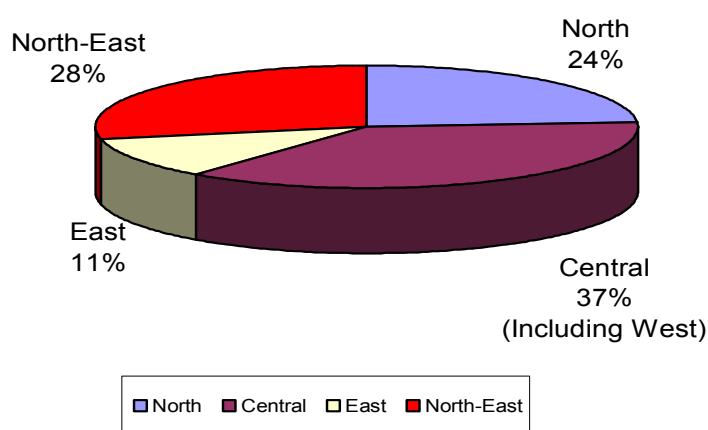
The domestic market is effectively an oligopoly market, controlled by a few wealthy mill owners, managing production from thousands of small producers who stand at the base of the production process. Due to the fact that the government prevents more mills from being established, there are only 46 mill factories in Thailand, which are generally arranged into 10 groups and 3 sugar associations (Office of the Cane and Sugar fund 2005). The ten groups are Kam Paeng Pech group (2 mills), Bann Pong group (3

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<sup>13</sup> 150,000 Million Baht is approximately 2,143 Million Pounds Sterling based on 70 Baht a Pounds.

mills), Thai Rung Reaung group (7 mills), Ta-Ma-Ka group (4 mills), Thai Ekaluck group (3 mills), Kasert Phol group (2 mills), Suphantburi Group (4 mills), Wang Kha Nai group (4 mills), Mitr Phol group (4 mills) and 13 independent mills (Office of the Cane and Sugar fund 2005). The Thai Rung Reaung group is the biggest sugar manufacturer. The three associations are Thai sugar factories association, Thai sugar manufacturer trading association, and Thai sugar industries trading. Figure 5.1 shows the location of those mills (Office of the Cane and Sugar fund 2005). Most of the mills are located in the Central and North Eastern part of Thailand, which implies that they are in the biggest sugar cane plantation areas.

**Figure 5.1: Number of Sugar processing mills by region**



Adopted from: Office of the Cane and Sugar fund 2005

As has already been stated, the government passed a law, the Sugar Cane and Sugar act, in 1984, which remains in use today. This law required the mills to pay at least minimum price to purchase sugar cane from the farmers and also sells no higher than a maximum ex-factory price to their domestic customers. These prices are set by the local government, which can vary region to region. The Thai central government will approve a minimum price proposed by the minister of the Ministry of Industry as a benchmark for the local governments.

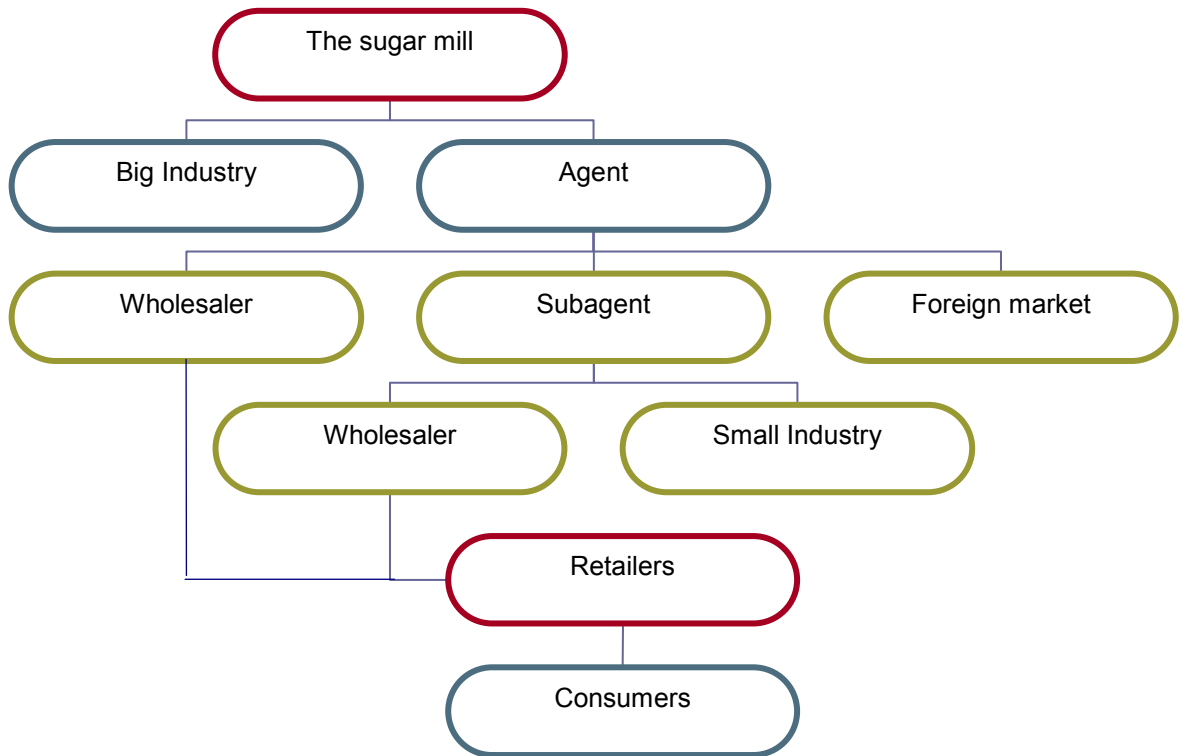
Suppliers and customers' relationships in Thai sugar industry are relatively closed especially relationships between the farmers and the mills. These

relationships are closely linked due to many reasons. One main reason is that sugar cane is the only plant that has to be registered under the Sugar Cane and Sugar act before getting started. This act was passed in 1986 and has resulted in the collection of information about the sugar cane farmers in order to set policies toward the growing of the sugar cane (Office of the Cane and Sugar fund 2005). After being approved, most farmers are allocated to a mill to prevent excess supply and ensure that the cane produced will be bought as sugar cane has to be crushed within 24 hours of harvesting, the plantation has to be nearby or in the vicinity of the factory or else the quality of the sugar cane crop deteriorates. In order to prevent this damage, the mills and the farmers have to work very closely with each other during the harvesting season.

The company has also strength their relationships in order to ensure high quality of both raw materials - sugar cane, and products - sugar; NY Sugar provides financial assistance to the farmers to grow and maintain their cane plantations. It also provides the farmers with good cane varieties to make sure of the best cane yield. According to the law, the provisional and final cane prices paid to the farmers are calculated and compensated reasonably under the committee, comprising of representatives of canes farmers, sugar-processing mills, and relevant government authorities. Moreover, the NY Sugar also provides fertiliser together with research and development to support the cane planters in order to increase their productivity. The company also shares knowledge with the farmers providing cane growing techniques and methods to obtain good quality cane.

The Thai domestic sugar market comprises sellers, the sugar mills, customers, large industries (e.g. soft drinks, foods canning factories, dairy products, confectionery, medicine, etc.), agents, wholesalers, foreign markets, sub-agents, small industries, retailers, and consumers. Figure 5.2 presents the traditional stakeholders who may be involved in the domestic sugar market. Sugar mills produce and sell sugar to big industries and agents. Agents, then, distribute to wholesalers, sub-agents, and perhaps foreign markets. Sub-agents, subsequently, allocate to wholesalers and small industries. Finally, wholesalers deliver to retailers who then reach consumers.

**Figure 5.2: Thai domestic sugar market structure**



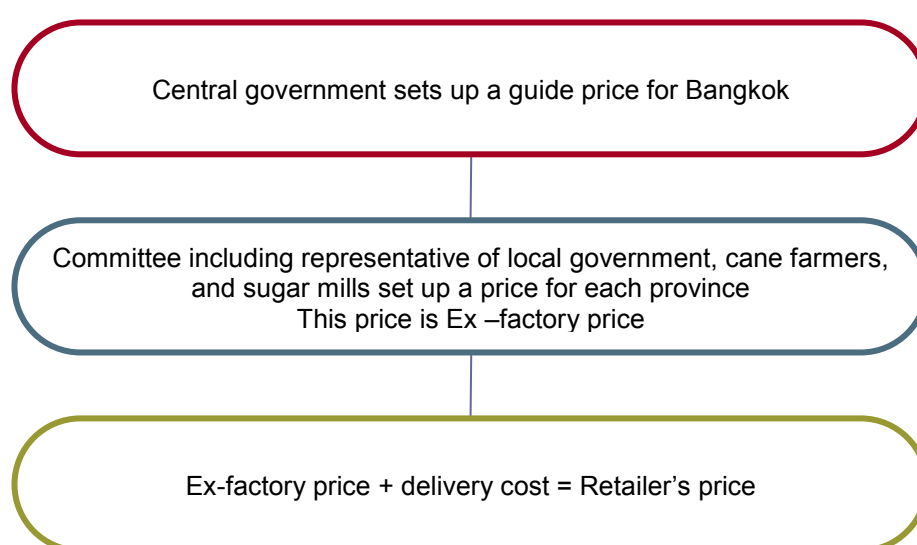
Based on: Office of the Cane and Sugar fund 2005, intervieweeA1, the owner, and company's internal documents

The sugar mills however, are bounded to the government laws for the maximum price and minimum volume to supply sugar to the domestic market i.e. they have to meet the domestic demand before they can start exporting the surplus. The price itself, therefore, may or may not reflect the cost of production; instead, it will be based on the policy and match the market demand. Most sugar mills in Thailand traditionally sold their products via several big agents who have long-term relationships.

Nowadays, many mills have been changing their strategy to sell their products to different people such as industries, wholesalers, agents, and retailers to maximise their profits and also distribute financial risks. NY Sugar has also started to sell their products through other channels rather than big agents. The company currently distributes its sugar through big industries, agents, and retailers. The big industry purchases mostly in credit and the company has to take the financial risk; the price was less than the maximum price set by the local government. This group of customers normally specify the types of sugar they require, for example,

super refined sugar for Japanese drinks company. The big agents or wholesalers will obtain the lowest price possible; they however, pay straight forward in cash, cheque or bank transfer. The company has just started to target the third group, retailers, for the last two years. The company has started with local retailers, which are located within 100 kilometres from the factory in order to obtain the advantage of low transportation costs. With this group, the company can sell to the customers at the maximum price set by the local government, resulted in a higher profit for the company.

**Figure 5.3: Sugar price formula**



Source: IntervieweeA1

In order to export the surplus, sugar-processing mills have to ask for permission from the Export committee and are required to follow the rules of the International Sugar Agreement (ISA), which is set up by government and companies. They can either export directly to the customers or sell through trading companies or brokers such as Curry Trading Ltd. (Hong Kong), Tate and Lyle Ltd. (UK), and Louis Dreyfus Ltd. (France). Thai sugar mills export their products mainly via the latter. Every Thai sugar exporter, however, has to follow a procedure endorsed by the government. This procedure is quite complicated involving many government agencies, which is one reason why there are not many mills that export their products directly to the customers.



Although, in the export market, a sugar price is set up based on the world market prices; the world's most well-known and popular markets are the New York market and the London market. These two markets show the price of spot market and future market for every commodity including sugar. The price of sugar will be reported through many types of media daily. Every country, therefore, is informed of the current world market prices. In this case, the intervieweeA1 stated in the interview that "the New York market is generally used for benchmarking the raw sugar price and the London market is used for white and refined sugar prices".

The sugar industry is a seasonal market. Globally, sugar cane is cultivated in two different periods depending on plantation areas. In northern hemisphere countries, the harvesting period is from December to April or May subject to the productivity of each year. In the southern hemisphere, cutting is from around May to perhaps November. In order to balance the supply, the world sugar trade is normally performed as future trades, which could be up to 18 months in advance. The sugar-processing mills, therefore, produce to deliver what they have agreed to sell in the past. The mills' production plan could be well organised to match the orders, however, sugar cane is a plant that the quality and quantity of which are subject to annual weather and climate changes. The mills, therefore, have to forecast or predict supply for the next eighteen months and set up agreements with the traders or brokers. They also have to anticipate the price for selling eighteen months in advance as well in order to maximise profits. Hence, decision-makers need accurate information to support their decision-making.

## **5.2 ARA Model and marketing decision-making in NY Sugar**

As discussed in literature review chapter, within an organisation, the ARA model could be drawn from when functioning or performing any activities. After completing the analysis and interpretation of all the obtained data and information from various sources e.g. interviews, company internal documents, journal articles, newspaper, and web sites, a way to present the findings is to write it in a complement with the ARA model, as it seems to be an easy way to link back to the literature as well as answer the research questions and reach the research aim. The ARA model contains three layers: Actor, Resource, and Activity. As defined in chapter 2, in this

chapter actors are those decision-makers who make marketing decisions; resources are MKIS that could be either internal and external sources including IS and/or IT tools, humans and their relationships and physical facilities; activities are any B2B marketing decisions that the actors deal. Further, in this section, these three layers will be elaborated in the context of NY Sugar.

### **5.2.1 NY Sugar's Actors**

NY Sugar divided their organisation into a number of departments: production, accounting and finance, sales and marketing, human resource, administration, and purchasing. Each department has a manager and a few officers except production department that has many hierarchies ranging from production manager, plant managers, line supervisors, and over a thousand workers working in the factory. Heads of each department reported directly to the CEO who is one of the owners. According to the emphasis of the thesis, only marketing decision-makers are the actors of the company. In this case, the ones who have dealt with marketing decisions are those who work in the sales and marketing department as well as the CEO. Only four people work in the department which are a manager and three salespersons. Hence, actors in the case would be these people: the manager, salespersons and the CEO. However, after a discussion with the CEO the very first day to ask for permission and to gather some information regarding the company, the CEO was then excluded from the respondent's list of this case due to the fact that he was not actually make marketing decisions. All the decisions have been dealt with and made by the manager and then the decisions relayed to the CEO. This may seem strange but it is happening because the CEO has just taken over this position from his father and he trusts the manager who has served the company well over nine years.

*"Before I execute any decision, I normally wrote a report with reasons why I came up with the solution, information as required to support the decision I have made, and then proposed it to the CEO for approval. ... The CEO has always agreed with me because I have more experience in the industry."*

*IntervieweeA1*

These left four actors to approach for interviews, however, after the permission was given, an appointment with the manager was scheduled first. The others were asked for interviews; however, they refused. One reason was inconvenience, as they were located in the factory where the target customers are and did not have time for the interviews. Moreover, they added that had recently joined the company after the manager decided to target local retailers and they hardly make any decisions yet. The latter was also confirmed by the manager. Therefore, only one respondent was interviewed in this case or two if the CEO is counted.

As defined earlier, actors can be classified into three groups: providers, integrators and users, based on their interaction with the resources. An actor could be sorted into more than one group when they play different roles or deal with different decisions. However, with a decision, an actor will be put in only one group. In this case, the sole respondent could be classified as an integrator and user. He is an integrator when he was dealing with foreign market's decisions as he usually provided and controlled resources i.e. customer database both retrieved, manipulated, and used it to support his decision-making. He is a user when he dealt with the domestic market, especially the new target customers because he typically utilised data and/or information he gathered from various sources e.g. subordinates, local government, and newspaper, to support his decision-making; he was not the one who provides and controls the resources.

### **5.2.2 NY Sugar's Resources**

Resources in an organisation, as defined in chapter 2, can be classified into IS/IT tools, humans and their relationships, and physical facilities. NY Sugar's resources could also use the same classification. Starting with *IS/IT tools*, in NY Sugar, there is a main system linked between office and factory, Nirvana, implemented in the company to use as a central database sharing among the department, however, it was not really successful in terms of encouraging people to use it, especially, the marketing manager, the solely respondent of the case. He was not even naming the system when he was questioned about resources used to gather data. Instead, he has created his own customers database.

*“The company does not actually have a proper database like SAP, but I have created one using Excel to keep record on customers and every transaction”*

*IntervieweeA1*

The database he created was simple and consisted of basic information about customers, for instance, prices offered to the customers for each type of product, types of products customers has been ordered, delivery date. This information he has kept to his own, i.e. he did not share the database with any others. If the others would like to have it, they have to go and search from hard copies or ask him, and he will look for it in his database and then answer the person.

Since the NIRVANA turned out not to be as successful as expected, the company did not yet have a centralised-database that stores and share information across the entire organisation, however it is linked to the headquarter office and with the factory which also stored and shared transaction information between accounting and finance, purchasing, and production departments. Information available in the systems includes sales transactions, customer information, supplier information, as well as production levels and stock availabilities; this information was mainly available in mostly accounting and finance bills and reports e.g. purchasing orders, sales orders, and other receipts.

Another important IT tools is the internet; the respondent referred to the Internet as a source of information he usually utilises, especially, various websites published by the government agencies. For example, <http://www.sugarzone.in.th> published by the Office of the Cane and Sugar Fund which provides information related to almost all aspects of Thai sugar industry including prices, laws and regulations, and plantation technology. The other websites he was also mentioned are <http://www.tisi.go.th>, the Ministry of Industry's website, <http://www.moc.go.th>, the Ministry of Commerce's website, and <http://www.nso.go.th>, the National Statistics Office of Thailand. He has also used the internet to update himself on knowledge about the worldwide sugar market.

The second type of resources is humans and their relationships. The company has a few officers working in the sales and marketing department; the manager is the one who makes decisions, while the others could be accounted for as resources that provide data/information to the actor, collecting data/information either according to the actor's requests or by having knowledge within them. Humans and their relationships have not been limited to internal availability only, they could be external too. In this case, the actor has gathered facts, data, and information from external people e.g. customers, friends, and colleagues whom he has relationships where it was not available internally. It was not much of a surprise as a Thai person who knows well about how powerful the connections are in Thailand. It may however, astonish others. The respondent talked about the varieties of the relationships he exercised during the interview in gathering decision-support regarding the two markets: foreign or domestic markets.

To gather information related to domestic market including information related to domestic competitors, the respondent gathers it mainly by exercising his connections/relationships with people who work in various organisations especially government bodies, competitors, customers, and suppliers. These people could be friends, relatives, or even previous colleagues of the respondent. Given the personal relationship with these various people, the respondent would obtain the desired information that may or may not be published; it is, however, fast and reliable information. To obtain the desired information from those people, the respondent may give them a call or arrange meetings with them and ask for the information.

*"I will give the one who I know that s/he has the information a call and then ask for it. S/he may answer the questions directly or gives me the specified sources that I can search for it in the case that s/he does not have the information on hand or have ability to pull out the information for me."*

*IntervieweeA1*

Moreover, the respondent also gathers information about the foreign market situation on a daily basis from his customers such as Cargill and Tate & Lyle with whom he has established the long-term relationship or personal relationship via telephone or e-mail. He exercises his personal

relationships to obtain foreign markets' information, especially the unpublished ones. Personal relationships with suppliers, especially shipping companies, also allow him to obtain information regarding the supply and demand of sugar in the world market.

*Physical facilities*, in general, the company provides laptops and/or PCs with all the necessary software such as Microsoft Office installed for everyone in the department. The other things that could be accounted as physical facilities are subscriptions to magazines, journals, newspapers, as well as other hard copy documents available within the company. Especially, government publications that the company subscribed to such as the Journal of Sugar Cane and Sugar published by Office of the Cane and Sugar fund, showed ex-factory prices announced by local government announcements, and other regulations related to the sugar industry published by other government bodies.

### **5.2.3 NY Sugar's Activities**

Marketing activities in focus of this study, as stated, are marketing decisions, which include all decisions that the actor has dealt in regarding to B2B marketing. In this case, the actor was responsible for various marketing decisions including pricing decisions, decisions related to locations and distributions, decisions on recruiting people to work in the department. In foreign markets, which is approximately 70 percent of the total sales, decisions the actor usually dealt with are mainly pricing decisions, especially negotiating selling prices, terms of payments, and delivery times. These decisions could be seen as programmed decisions as the respondent has experienced and always dealt with these decisions.

In domestic market, challenges have been changed as a result of shifting the target customers from a few wholesalers to many local retailers who are located within 100 kilometres from the factory to benefit from cheap transportation costs. Prior to the change, the decisions were similar to the ones in the foreign market; currently it yet includes many other decisions, for example, recruitment of the retailers, brand establishment, recruitment of salespersons, sizes and design of packaging, products offered to the market as well as set selling prices for both retailers and wholesalers. These decisions are challenges to the respondent as they are relatively

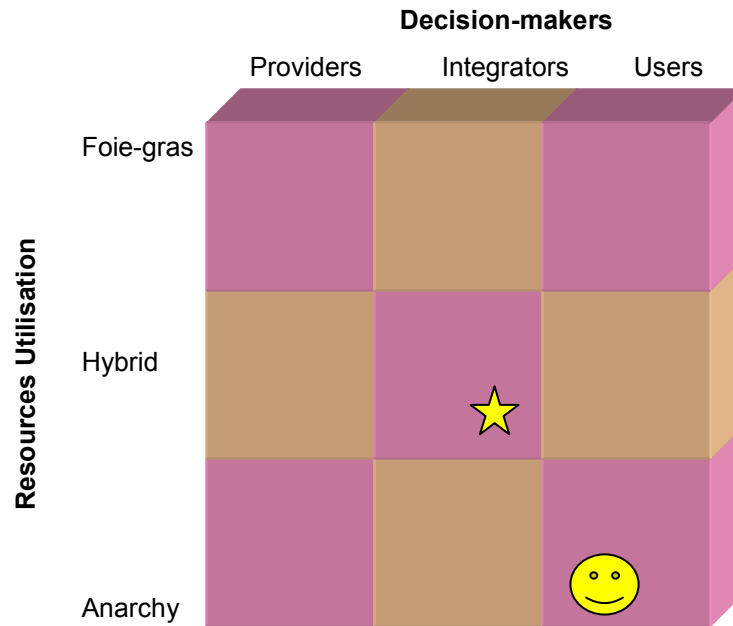
new; they therefore are not the programmed decisions, but are non-programmed decisions. The respondent has also dealt occasionally with decisions regarding communication and packaging.

Although in the literature review chapter it said sometime resources could also perform activities, in this case, it was not obvious that any resources have been performing any activities regarding the decision-making, except for humans; these are the people who the respondent has relationships with that might perform their own activities to gather data/information for the respondent. This means these people transfer resources to the respondent. Whilst the other means, the actor transforms the resources to support his decisions.

### **5.3 Decision-making and Resources utilisation**

The above discussions are the three layers of the NY Sugar's ARA model, which illustrates the case actor, the existing resources, and the focus activities. Now it is time to investigate how the actor utilises the existing resources to support their decisions. Varieties of information are needed to support marketing-decision making depending on the nature of each decision and its environment. As discussed in the literature review chapter, the actor may employ different approaches ranging from coherence to chaotic views, and utilise resources to support their decisions lying between the linear of two extremes: foie-gras and anarchy. Evidence from the NY Sugar shows that when the actor plays different roles: integrator and user, he utilised resources in slightly different approaches: hybrid toward anarchy and totally anarchy (See figure 5.4).

**Figure 5.4: Resources utilisation of the NY Sugar's decision-maker**



When the actor plays the role of *integrator* that is the time when he usually has control over the resources and utilises them. It usually occurs when he is dealing decisions regarding foreign customers. The respondent has lots of experience working with these customers i.e. nine years in NY Sugar and previously nine years in another company. Hence, the respondent has built up a good long-term relationship with these customers both personally or and for business. The foreign market is a competitive market with relatively less control from the government although the company has to ask permission to export. Given a competitive market, the decisions are more complex compared to an oligopoly market such as the domestic market. The respondent has to deal with all pricing, shipping, packaging, costing, quality control, and forecasting. He deals with new customers as well as builds relationships with existing customers. Some information such as transactions, sales agreements, and detail of customers, is stored in the database, either his database or NIRVANA; some others are not. When he makes decisions, the respondent will use his database first and then look for other dynamic information such as world market prices over the internet or chat with customers later.

Furthermore, the interviewee also brought up his different approaches on dealing with new and existing foreign customers. For example, when dealing with an existing customer who he has established a long-term



relationship, he normally made decisions based on his experience with the customer as well as information he has at that moment e.g. data kept in his database, information gathered from the customer, and the benchmarking prices. On the other hand, for decisions related to new customers, the respondent typically searches for data and information from multiple sources to verify their status including credit checking, location and reputation verification; this information was generally gathered externally on an ad-hoc basis.

These processes show that the respondent uses the existing resources in a foie-gras way when the databases or internal documents could have forced him. Nevertheless, it seems there are insufficient decision-supports for him as he also seeks further information on an ad-hoc basis to confirm the data especially by making a phone call to customers or searching for information from the internet. These show that the actor utilises resources taking a *hybrid toward anarchy* approach as illustrated in figure 5.4 using a yellow star.

On the other hand, when the actor did not have direct control over resources, he only made use of them, i.e. he plays the role of users. It is usually when the actor dealt with non-programmed decisions, or any decisions that he did not have data/information available in his database, especially decisions related to domestic market. It may be caused by the fact that the company has just shifted strategy to focus on this group only a couple of years ago, which resulted in the respondents not having sufficient data/information to support his decisions. He, then, has to gather almost all data/information on an ad-hoc basis.

As the company has less authority to control prices for domestic market, it has been controlled by the local government. The company has to sell their products not over the maximum price set by the local government. In the start of the interview, the respondent mentioned that marketing strategy is almost useless in the domestic market, especially in the old fashion when the company sold to only a few wholesalers for the domestic market, the respondent did not have to worry much about the decision-support, he only has to make the price as cheap as possible for the customers.

*"I have almost never used any marketing tools or strategy apart from offering the price as low as possible to attract the customers."*

*IntervieweeA1*

However, after a while, he did refer to various decisions that he deals with for the domestic market. Decisions related to the domestic market, the respondent has dealt with are mainly relating to channel management, product packaging, and quota management. The aim of each decision is to minimise costs and maximize profit, which is quite classic. Due to the fact that the ex-factory prices exclude transportation and packaging costs, within the local area (a 100 kilometre radius of the factory) the company obtains advantages directly in terms of pricing as a result of cheaper transportation costs. The respondent has thus decided to shift the target customers to local retailers two years ago. In terms of to what extent he utilises the resources to support the decision, the respondent relied most on *his experiences* to make this decisions as he said many times during the interview.

*"I works in the company over 9 years and I have another 9 years working in Mitr Phol company, so I am a professional ... I know what is going on very well in the sugar industry ... I, therefore, rely on my experience, I know what I need to support my decisions. ..."*

*IntervieweeA1*

Apart from developing a new target market, the existing market is also important. Relationships with the existing customers need to be maintained. The consequence of changing target customers is higher potential profits; the respondent, however, has no experience in dealing with local retailers. In order to recruit local retailers, without any particular reason, he firstly targets the largest one in each district. The company initially has no data or information available in assisting the identification of who are the largest local retailers. The respondent and his subordinates, therefore, have to go to each local area and search for them on an ad-hoc basis.

*"I went to the factory and nearby areas at least once a month, but my teams were there permanently in order to sell to the local retailers and expand the market. ... Information related to these retailers, I was normally searching for it by myself or asking from the sales representatives ... in the case that they did not have the information, I would try on other sources."*

*IntervieweeA1*

The next question is thus, how the respondent searches for the information. The answer was quite simple; he and perhaps his teams paid a visit to each area, then observed and asked local people until he found out the largest local retailers in the area: the potential customers. He also sent sales representatives to talk to various retailers to obtain the information. There is no set of standard for the recruitment apart from preferably the largest one. The decision is then totally based on information the respondents obtain externally. After select the potential customers, he then offers the target customers a lower price than what they receive from their suppliers. The sales representatives gather as much information as possible from each retailer especially their costs, suppliers and consumers' lifestyles. If the largest one does not switch to them, the respondent and his teams will change the target to the second largest and assist them to compete with the largest one with even lower prices. With this strategy, the largest one finally turns into their customer as well as the second largest one.

Decisions related to product packaging, the respondent states during the interview, that in order to compete with its competitors and attract the new target customers i.e. the local retailers, packaging needs to be tailored to suit the consumers' lifestyles. For example, pack sizes need to change from big bulk packs of fifty kilograms a bag to a smaller size: a kilogram a bag for the retailers. Alternatively, they do sometimes have to pack into two teaspoons pack to match with the consumers' lifestyles. The respondent, therefore, needs to know and understand the local people's lifestyles, which are different in each area. In order to obtain this information, unsurprisingly, he obtains it via conversations with the customers and sometimes sales representatives. The retailers rarely speak directly what they actually want or what they think the consumers

would prefer; the respondent and his teams therefore have to ask for their opinions, which also sometimes are not exposed easily due to the nature of Thai people i.e. respect others and do not try to expose their opinions. Therefore, it is quite difficult to obtain details about the lifestyle of the end-users. The respondent thus ends up making decisions on the basis of his intuition and experience without consulting any further resources.

Decisions related to Quota management are also the responsibility of the respondent. Quota in the domestic market as described earlier in this chapter is the volume (in metric ton) of sugar that the company is forced to sell in the domestic market, and typically, it is around 30% of the annual production of the company. Nevertheless, it is subject to the company or in this case, the respondent, on how much it will release to the market at each time and which type of sugar throughout a year. In other words, the respondent has to make decisions when it will be the best time to release which type of sugar to the market to maximise profit. The respondent has to consider which of those combinations will result in the best outcomes for the company. The respondent, therefore, needs various types of information to support the decision-making, for instance, transportation cost, production cost for each type of sugar, stock levels, and delivery due for the foreign market. Some information such as transactions or agreements for the foreign customers and stock levels, the company has them internally in NIRVANA. The respondent, however, never mentioned about using this software at all. It could possibly be because of the respondent is not aware of the existing program because it was not implemented in the marketing department or he may just ignore the existence of the software because he does not want to use it. In the researchers opinion, the latter is the reason because every time he was questioned about information technology either existing software e.g. NIRVANA, or other technology e.g. ERP, e-purchasing, or e-auction, his answers came in the form of their failures and how those applications are unsuitable with the company's business. Moreover, he is also very happy with the current situation that allows him freely to search for information anywhere by any means and the top management respects his decisions.

*“... Talking about e-auction that the government forced us to use in order to prevent the corruption; the costs of implement was very high, over 0.10 Baht<sup>14</sup> a kilogram combined with other expenses such as letter of credit guarantee, Value Added Tax (VAT)<sup>15</sup>. ... The expenses are too high. I, therefore, gave a director of X<sup>16</sup> organisation a call and told him what actually happen to the cost and the price the director will end up. ... The bidding was end up with traditional way.”*

*IntervieweeA1*

Information used in forecasting variable costs such as transportation and production costs was not stored in any of the databases. The respondent gathered all this information mostly from external sources e.g. the internet, newspapers, and friends.

*“I have created database containing all information I need related each customers, and I normally used them when I need ... it, however, was not shared to anyone in the organisation.”*

*IntervieweeA1*

These examples determine that when the actor plays the role of user, he more or less employs anarchy resources utilisation to support the decision-making, which is indicated by the smiley face in figure 5.4 because he employs relatively ad-hoc methods and happily makes the decisions based on his intuition.

In addition, during the interview, he seems very happy with these situations that allow him to search for the desired data and/or information himself. He stated during the interview that even if the company provides a good system that could feed him with the necessary information, he would remain searching for data and information at least to verify them. This implies that when he is a user, he utilise resources in a relatively anarchy, which is shown by a yellow smiley face in figure 5.4. In contrast, when he is an integrator, the way he utilise resources was changed slightly to a

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<sup>14</sup> Baht is Thai currency, which are approximately 70 Bath a British pound or 42 Baht a US dollar.

<sup>15</sup> Value Added Tax (VAT) in Thailand is 7%

<sup>16</sup> X organisation is an example of a government department, which cannot be exposed considering confidential.

hybrid which is somewhat leaning toward the anarchy end indicated in the figure 5.4 by a yellow star. This could be caused by the fact that he has ability to control the resource and he relies on the database he has created.

#### **5.4 B2B-related Factors influence the resources utilisation**

B2B related factors identified prior by the literature reviews are (1) number and value of customers, (2) supplier-customer relationship, (3) Nature of demand, and (4) types of networks. Based on the evidence from this NY Sugar case, three out of the four can be concluded to have influences on the way the actor utilise resources; in other words, these factors affect the interactions of the actor with the resources when he performs the activities. Specifically, these factors produce noteworthy influences on the changes from the hybrid toward anarchy to the anarchy resources utilisation of the actor; the influences can be illustrated as followed:

As defined in the previous chapters, *the number and value of customers* could be determined by the power of customers. The evidence of this case shows that the company, specifically the actor, values each customer differently which is similar to the statements made by Dwyer *et al.* (2001: 8) and Ford (2002: 5) as presented in chapter 2 (section 2.4.3.1). The power of each customer in this case decides the value of them, which is dependent on volume purchased, and importance of the customers toward the annual income of the company as well as their relationships. Although, it seems that the actor did not value their customers based on the number of them as discussed in proposition 1, the respondent has yet attempted to eliminate the power of customers, especially the wholesalers by increasing the numbers of customers, especially the local retailers. This can implies that the power of customers is also based on the numbers. The interview showed that decisions regarding the high power customers i.e. existing customers who have or potentially have relatively high purchase volume and are sizeable to the company profit, the respondent tends to make decisions based on what he has on hand and on his experiences with the customers rather than gathering information from anywhere else. These showed that the actors tend not to perform step-by-step but make decisions based on his intuition, which is in line with the anarchy resources utilisation. On the other hand, decisions related to relatively low power customers, e.g. new customers or bad credit customers, the respondents would gather

information regarding the customers from different resources available at the time and make decisions very carefully, step-by-step. These effects of the power of customers on the ways decision-makers utilise the resources, therefore, could be concluded as the higher power the customers have, the less foie-gras the resources utilisation is. Moreover, it could also be said that decisions related to the fewer but larger buyers may have higher power than the others and then the decision-maker utilise the existing resources with relatively more anarchy.

*Supplier-customer relationship* could be seen as a major B2B factors affecting the resources utilisation of the decision-maker. Relationship, according to the literature can be classified using two different bases: (1) classification on the basis of how well an organisation has integrated its customers and suppliers and (2) in terms of period of time that they have dealt with each other. Based on the first classification, NY Sugar has integrated with its customer by an auction exchange or stand-alone due to the fact that the company did not share any information with the customers, however it linked with the suppliers using a collaborative network or alliances. These different linkages may alter the way the actors utilise the resources if he has dealing with decisions regarding either parties, yet, the actor rarely made any decision regarding the suppliers. Nevertheless, when he needs data/information regarding the productions or supplies, the actor then could retrieve the information from the production department. On the other hand, information regarding customers is stored in his database that he has control over, so he may then gather information that was not in the database on an ad-hoc basis. These imply that for different types of linkages, the decision-maker may utilise their resources in a different manner, which is similar to what it is said by Berthon *et al.* (2003) discussed in chapter 2.

If the relationship is classified on the basis of time as defined in proposition 2, relative long-term relationships, in this case, could be over a period of 10-30 years. The short-term relationship customers refer to the ones the company or the respondent has been dealing with less than a year, or on a one-off transaction. The former will obtain some privileges from the respondents, whilst the latter will be treated as regular customers. The

long-term relationship customers have proven themselves as growing with the company and flexible; the decision-maker mentioned in the interview that he knows them well enough to make decisions right on top of his head for routine decisions such as the price offered. The decision-maker, however, stated that in the case where he needs more information, he might ask for it from the customers. It shows that with long-term relationship customers, trust is built to a certain level, allowing the decision-makers to exchange some important information such as information regarding price, market situation, or even competitors. The resources utilisations the decision-maker employs when dealing with decisions regarding the relatively long-term customers is a hybrid toward foie-gras when it is routine decisions, but it however, will change to a hybrid toward an anarchy approach when it is not a routine decision or when the decision-maker has not enough decision-support.

On the other hand, with decisions regarding short-term relationship customers, the decision-maker tends to make decisions based on what he has got at that time: his experience and facts gathered from external sources, i.e., data or information provided by the customers, bankers, and/or friends who may have knowledge about the customers. The decision-maker, therefore, acts as an anarchist when dealing with short-term relationship customers. These conclusions are slightly different from the proposition proposed in chapter 3 which stated the longer-relationships they have the more anarchy the actor would utilise the resources. However, it is somewhat similar to the literature in the way that with short-term customers, the actor has a little knowledge on them, so he may be faced with problematic preferences as his databases could not feed him with an appropriate decision-support (Cohen *et al.* 1972; Takahashi 1997).

*Nature of demand* as defined in Chapter 2 is considered in terms of where it is derived (Haas 1976: 21; Kotler 2001: 216), i.e., derived from end-users or not. Sugar is a standardised product, which can be sold in the market as white, brown, or raw sugar. Demand for sugar in the overall domestic market is quite stable as it is a necessary product. To be able to identify the derived demand, questions were asked, and the results can be divided into two groups according to customers' purposes of purchasing the



products. In this case, sugar is purchased to use as raw material and end-users have no influence at all. For instance, when an industry, say canned drinks, orders sugar to put in their products, the end-users preferences do not influence the specification that the industry specified when they make an order. The customer solely decides whether white or brown. The demand, therefore, is derived from customers. With decisions regarding this case, the decision-makers tend to utilise the existing resources by employing what he has on hand, such as databases, historical transactions, and his experience with the customers. The resources utilisation he employs is a hybrid toward anarchy because the decision-maker has not been force fed with any facts from any resources the company provides.

On the other hand, when customers purchase sugar for reselling, the consumers' behaviour very much influences the demand for sugar. For example, the lifestyles of the consumers influence the demand for the products from the local retailers. The respondent also mentioned in the interview that health and convenience is a concern of consumers affecting the demand for sugar.

*"... Health conscious is currently creating a huge demand for brown sugar because people believe that brown sugar contains all the vitamins that good for body and they also believe that the decolourised process to make it white will damage almost all the good things..."*

*IntervieweeA1*

Hence, the decision-makers need to know and understand the end-users behaviours as well as their customers' behaviours. Due to the fact that the decision-maker does not have any information about consumers, he and his team then has to gather the information on an ad-hoc basis i.e. conducting market research, or discussing with the local retailer owners. Once he has the decision-support handy, the decision-maker makes decisions based on what he obtained, which represents the very chaotic way of resources utilisation.

There is another factor identified by the literature that may influence the resources utilisation: *type of networks*. Two different types of networks could possibly exist in any organisations, which are supplier network and distribution network, yet, only one type could dominate the other. Hence, the influences of the types of networks could be seen through the dominant type. In NY Sugar, it is rather difficult to justify which one is the dominant. However, by the answer of the respondents and the law, it seems that supplier network is the dominant one because the company has arranged a contract farming system to tie up with the farmers who are the major suppliers of the company. During the interview, questions regarding this issue were asked, yet the answers showed that the dominant type of networks has relatively no relationship with the resources utilisation of the decision-maker. It may be caused by the law that the farmers have to be registered with the mills prior to starting planting and they all have contracts with the mills so it may make no difference to the actor. Therefore, in this case, only three B2B factors could be influencing resources utilisations of the decision-maker, namely, number and value of customers, supplier-customer relationships, and nature of demand (See figure 5.5).

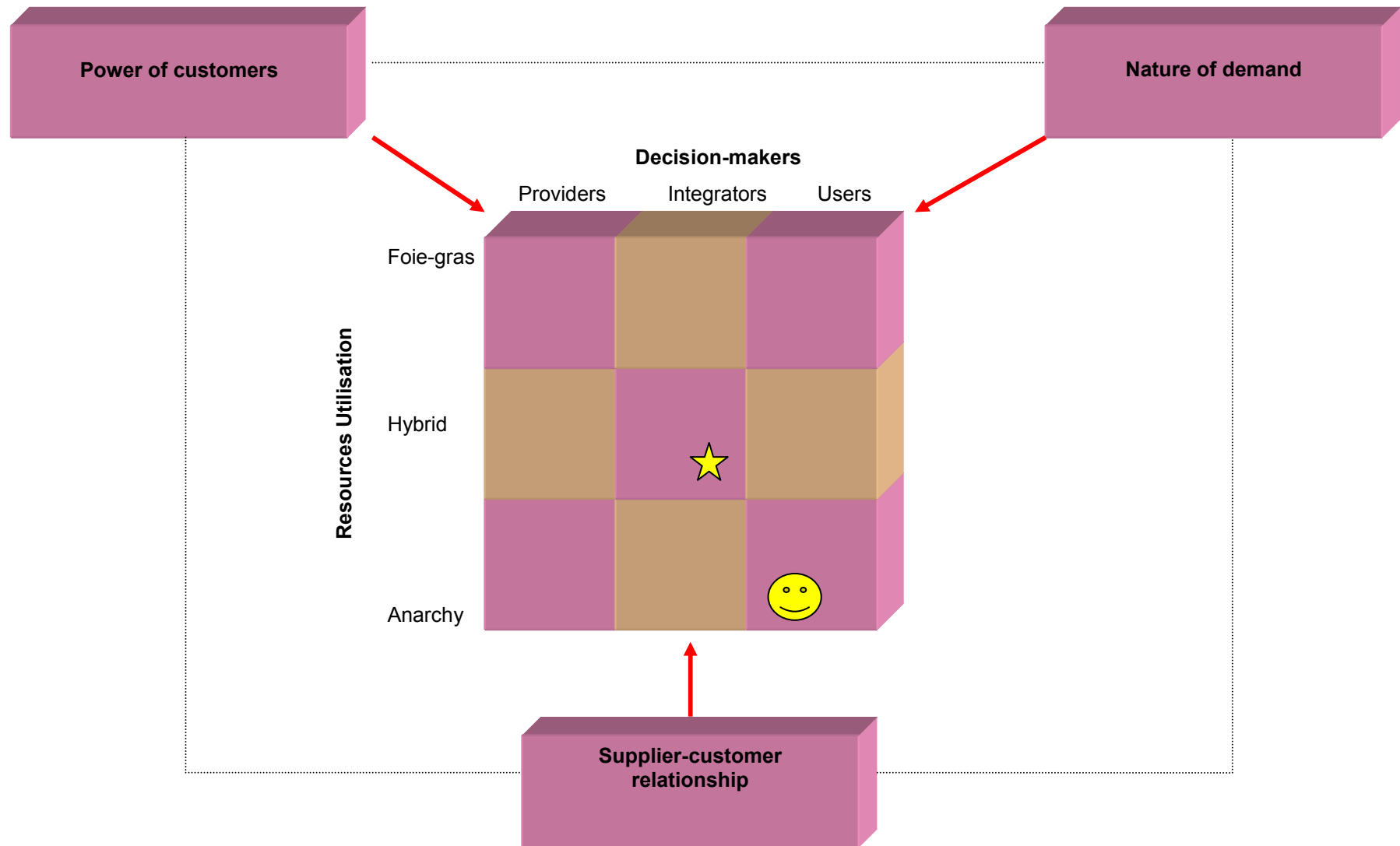


Figure 5.5: NY Sugar's Resultant Framework

## **5.5 Conclusion**

NY sugar is one of the sugar manufacturing companies in Thailand. This company has only four marketers. The sugar industry in Thailand perhaps is very different from other countries. The company does not have freedom to control price and volume in the domestic market as the government controls them. The government sets both quota and price for the manufacturer to produce and sell. Resources the company have provided to the actor are fitted into three groups: IS/IT tools, humans and their relationship and physical facilities. However, it was not a comprehensive one; it contains fragmented databases and sometimes is insufficient to support decision-makers.

The case evidence shows that the decision-maker plays the roles of integrator and user, and utilises resources in the hybrid ways tending toward anarchy and relatively anarchy, respectively. Three B2B factors, which are number and value of customers, supplier-customer relationships, and nature of demand, were found to have influences on the ways the decision-maker interacts with the existing resources. Other factors would also affect the resources utilisations, which are experiences of decision-maker, organisational structure, management style, government policy, nature of decisions, and level of organisational technology which will be discussed later on in chapter 8.

The actor, which is only one respondent in this case, may see it as a weakness especially when concerned with generalisation and comparability with the other cases. However, he is the main person who has made almost every marketing decision as well as plays the major role to influence the others who may deal with marketing decisions e.g. the CEO, and sales representatives. Moreover, the evidence from this case would be a good illustration of how the actor interaction with the resources within a different environment from the others two cases i.e. differences in industry, existing resources within the organisation, and management system.

## **CHAPTER 6**

### **CASE STUDY: SIAM CITY CEMENT PUBLIC COMPANY LIMITED**

#### **6.0 Introduction**

Siam City Cement Public Company Limited (referred to as Siam City Cement for the rest of this thesis) was the pilot case study. It also was employed as evidence to illustrate the ways decision-makers utilise resources to support their decision-making; to leave it as only a pilot case study would be a wasted opportunity. Siam City Cement is the second largest cement producer in Thailand. It is also the largest cement exporter; approximately 30 percent of its cement production is exported each year. The company thus has two groups of customers: domestic and foreign. Its customers are those businesses who purchase cement either in bags or in bulk to serve their business purposes: e.g. reselling, using as raw materials, or consuming. This chapter presents evidence from Siam City Cement to illustrate the ways decision-makers utilise their resources to support their decision-making. It starts with an overview of the construction and the cement industry in Thailand and then continues with a brief background of the company in order to draw a better picture of the corporate environment to lay the groundwork for further analysis. Siam City Cement's ARA model is then presented to describe the company's actors, resources, and activities. After that, a discussion on how these actors utilise the resources to support their decisions is presented. Factors found to affect the resources utilisation of these actors are then determined. Finally, a conclusion will discuss the strengths and weaknesses learned from this investigation.

#### **6.1 Construction and the Cement Industry in Thailand**

The Thai economy performed exceptionally well until the economic crisis<sup>17</sup> in 1997, as the national economic growth rate averaged 7.6 percent from 1977 to 1996 (Siamwalla 2000). The construction industry was one of the

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<sup>17</sup> The economic crisis happened in mid-1997. It was mainly caused by the collapse of financial systems as well as other fundamental weaknesses of the economy.

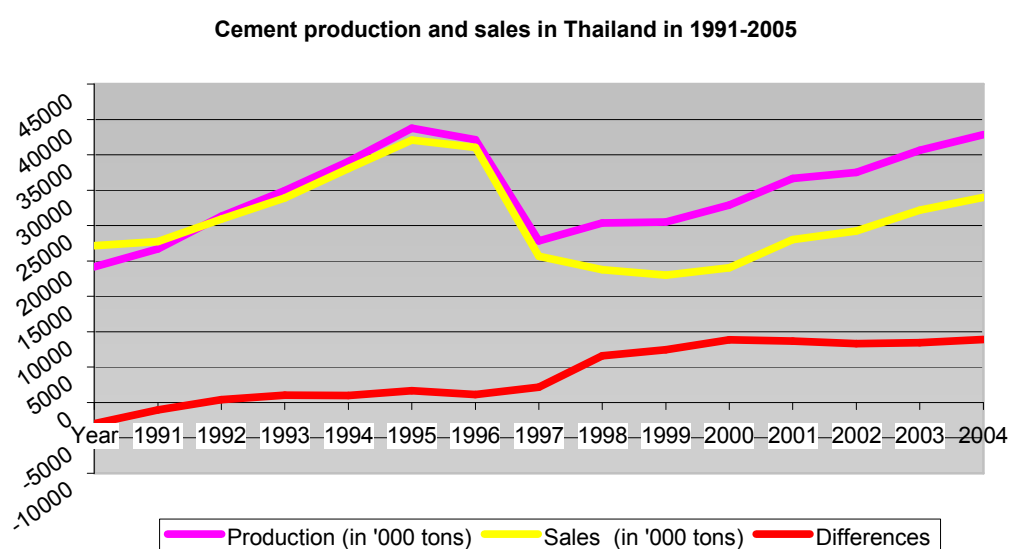
industries that suffered significantly as a result of the economic crisis. Many companies were bankrupted; some were taken over by foreign companies and some were forced to close. Many buildings were abandoned without being finished; many projects were finished but never entered the market until years later. All this created an immense impact on the building materials industry including the sale of cement. From 1990 to 1997, cement sales had increased significantly each year. However, the production had been insufficient during the high season, from December to April. This period is the time when people finish planting and are waiting for harvesting; they therefore have the time and money to build or expand their homes.

Figure 6.1 illustrates the total numbers of production and sales of cement in each year from 1991 to 2005 based on information obtained from the Business and Research Department, Krung ThaiBank PLC (2006). In 1991 and 1992, there was a shortage of supply for the domestic market, which resulted in rapid expansion of the cement factories. Some companies had even expanded further by establishing a warehouse in each region. New companies had emerged such as Samakkee and Cemex. Consumers often had to reserve the amount of cement they wanted. Moreover, this shortage also resulted in price increases; prior to the crisis, prices were controlled by the Ministry of Commerce. This policy was cancelled in 1997, but when any companies want to increase prices, they have to ask for permission from the Ministry of Commerce at least 15 days in advance. If the government agrees, they then can increase prices. A crucial date as far as the economic crisis is concerned was July 2<sup>nd</sup>, 1997; the high season had ended, so the effects of the crisis were not fully experienced until the start of the new season.

Both production and sales figures dropped significantly in 1998 because almost all construction projects were stopped as an effect of the financial crisis. The situation has been better since 2002 for the following reasons: government policies encouraged people to own their homes; large government spending on mega-projects led to the building of infrastructure; people had more confidence in the economic situation resulting in easier purchasing decisions; and increased purchasing power. Since 2002, the construction industry had recovered from the crisis and investment in

construction projects increased by 15 percent on average each year from 2002 to 2004 (Krung Thai Research Centre 2005). In 2005, growth slowed slightly to 8.4 percent, due to many factors such as rising oil prices and a high inflation rate. These resulted in less demand for housing and construction, therefore slowing the whole industry and decreasing the domestic cement consumption.

**Figure 6.1: Cement Production and Sales in Thailand, 1991-2005**



Source: Economic and Business Research Department, Krung Thai Bank PLC, 2006.

Thai cement producers are suppliers to both domestic and foreign markets. Approximately 65 percent of overall cement production is sold in the domestic market, and the rest is for export (Economic and Business Research Department 2006). Table 6.1 shows the overall cement production in Thailand from 1995 to 2005 (Economic and Business Research Department 2006). As can be seen from the table, prior to the economic crisis of 1997, the economic crisis period from mid-1997 to 2001 and the recovery period of 2002 to 2005, overall production has slightly increased because two main cement producers, namely Siam Cement and Siam City Cement, enlarged their capacity just before the crisis. However, during the crisis, cement production had dropped from 37.1 to 30.1 million tons, but production went back to the same level in 1999 mainly to serve

the foreign market expansion. Effects of the crisis on the industry were mainly drop in demand, currency fluctuation, and most importantly the devaluing of the Thai currency, from approximately 25 Baht per US dollar or 40 Baht per GBP to over 40 Baht per US dollar or over 70 Baht per GBP nowadays. Foreign debts had consequently doubled overnight resulting in higher repayment costs. Moreover, the domestic market's demand paused for a while as a result of less purchasing power as many people were laid off; many businesses had been closing down and went bankrupt.

**Table 6.1: Ten years figures of Thai overall cement production, domestic sales, export and import**

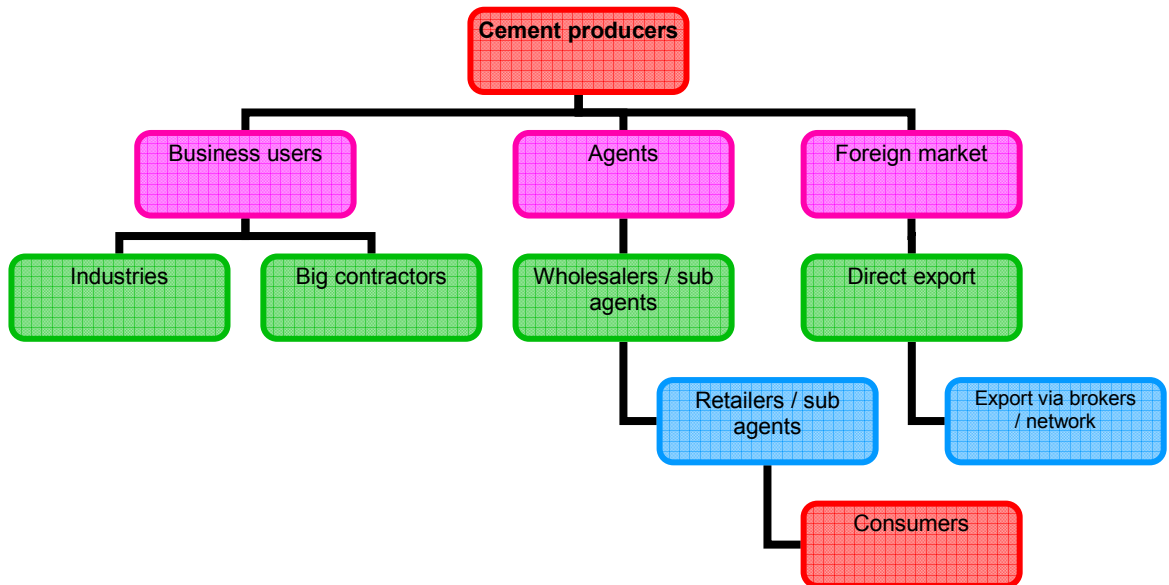
Items (Million Tons)	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Production	34.0	38.7	37.1	30.1	38.5	37.8	39.0	39.0	39.9	41.9	44.0
Domestic Sales	33.1	37.1	36.0	20.7	19.3	18.6	18.9	31.1	24.4	27.3	29.1
Export	3.6	3.9	6.4	9.6	15.5	15.2	16.1	18.2	4.3	11.9	15.7
Import	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Economic and Business Research Department, Krung Thai Bank PLC, 2006.

As stated earlier, the Thai cement market is comprised of domestic and export markets. Figure 6.2 illustrates the overall market structures of the Thai cement industry. Cement is distributed across Thailand in two different ways. The first is selling through agents. Each company has its own policies to select an agent on the basis of the amount purchased, locations, and the credit of the agent. In an area, a company normally has one agent and perhaps several sub-agents. However, there are also some exceptional areas in which a company has more than one agent. The second way is direct sale to users such as industries and big contractors. The customers in this group are mainly industries that utilise cement as their raw materials such as roof-tile factories, artificial wood manufacturing, and concrete block factories.



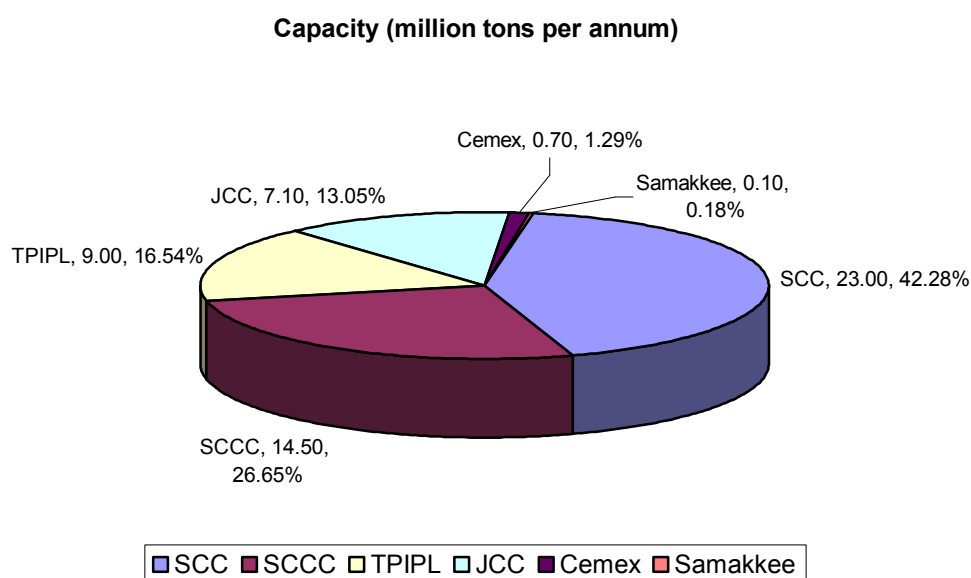
**Figure 6.2: Thai cement market structure**



Source: Adapted from interviews

Cement produced in Thailand can be classified into three types according to their qualities and applications: Portland cement, mixed cement, and special cement. Mixed cement is the bestselling; Portland cement is the second-best selling because it is more expensive. These two types are sold mostly via the agents. The special cement is sold to order and mostly directly to end-users. There are only six cement producers: Siam Cement PLC (SCC), Siam City Cement PLC (SCCC), TPI Polene PLC (TPIPL), Asia or Jalaprathan Cement (JCC), Cemex, and Samakkee cement (SMC). The production capacity of each company represents their domestic market share and it is shown in figure 6.3. Siam Cement is the biggest cement producer in Thailand, followed by Siam City cement who is the biggest Thai cement exporter. TPI is in third place, followed by Jalaprathan Cement.

**Figure 6.3: Domestic Capacity of Thai Cement Producers**



Source: Adapted from Siam City Cement Report, 2006

During the economic crisis of 1997-2001, Thai cement producers survived mostly by exporting to many countries, for example, the United States of America, Cambodia, Myanmar, and Bangladesh. In 2005, the main foreign destinations for cement exporters were the USA, Vietnam, Cambodia, Bangladesh, the United Arab Emirates (UAE). The USA became the main destination for Thai cement exporters, while the other destinations are mostly neighbouring countries. The export value was significantly increased from 4,387 million Baht or 62.67 million GBP to 12,044.16 million Baht or 172.06 million GBP and to 18,544.60 Million Baht or 264.92 million GBP in 1996, 2000, and 2005 respectively. In 2006, the export market has however been forecasted to decrease by 20 percent due to many factors, especially pressure on energy and the increase in domestic demand. There are, however, some positive factors that could encourage the export market; for instance, healthy demand for clinker in the Middle East, and demand in the USA for specialist cement products.

## **6.2 Background of Siam City Cement PLC**

Siam City Cement is the second leading cement producer in Thailand selling under the family brand of "Insee". The company has held the second largest market-share for many years, approximately 25-30 percent in the domestic market. At the end of the first quarter of the 2006, the

company held 28.7 percent of the market share. The company was established in 1969 with the registered fund of 100 million Baht as Siam City Cement Company Limited by a Thai family called the “Rattanak group”. The company began producing cement in 1972. In 1993, the company changed its status to a public company, and increased the registered fund to 3,000 million Baht. At the start, the company had capacity of only 0.6 million tons a year with the first factory. After that, the company has expanded and built another two factories to reach the capacity of 12.3 million tons per annum in 1996. In 1998, after the economic crisis, Holcim – a Switzerland based global supplier of cement - became a major shareholder; the company, therefore, was greatly influenced by western styles of management.

After Holcim became a major shareholder in 1998, the company adopted more western management styles into their organisation, i.e., having a clear vision, mission, and establishing core values<sup>18</sup> (Interview 1B, the marketing & sales vice president). The company’s mission is “At Siam City Cement, we deliver”, which means that the company tries to satisfy all the demands for cement of either customers or end-users. After repositioning in 2005, the company has added its corporate vision and corporate fundamental goals to the lists. In attempting to become “the cement solution provider”, the vision of the company is “to be the preferred application-tailored cement solutions provider, through effective internal and external collaboration along the value chain, achieving above industry profitability.” This vision shows that the company focuses only on its core business: cement. The company, therefore, sold its two subsidiaries: Karat Faucet at the end of 2005, and Royal Porcelain in 2004. Yet they have kept the associated ones, which are:

- 1 Siam City Concrete Company: ready mix concrete and concrete flooring.
- 2 Conwood Company Limited: produces fibre cement and supplies an artificial wooden.
- 3 Eagle Cement Holding Company Limited: is an investment company that invests only in the cement business.

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<sup>18</sup> Further Information about the company's vision, mission, and core values could be found in the company's website, annual report and other publish documents.

- 4 Lanna Resources Public Company Limited: produces lignite and other minerals to the cement producers.

In 2002, the company launched a campaign to re-brand their products, creating the "Insee" (Eagle) family. Products of the company were sold under different brands such as Insee, Diamond, Horse, and Three Diamonds; these had been re-branded to be "Insee" and now use colours to identify different types of cement. For example, Insee becomes Insee Dang (red), Diamond becomes Insee Pech (diamond), Horse becomes Insee Pha (blue), and Three Diamonds becomes Insee Dam (black). In 2003, the company launched a new product line: Insee Thong (gold), Thailand's first premium masonry cement. Moreover, in 2005, the company performed what they called "a big surgery". The company has started "repositioning corporate and products under the 'As I Wish' branding campaign or 'cement that meets the customer's demands', a move to conquer the hearts and minds of the customers" (Siam City Cement PLC. 2006). Siam City Cement has also introduced a ready to use dry mortar under the brand of "Insee Mortar Max".

The company has adopted a new marketing strategy, changing from mass marketing to segment marketing since 2005 and the company has also attempted to reposition both the company itself and its products to be a cement solution provider as stated in its vision. Table 6.2 presents the company's marketing strategies prior to 2000, from 2000 to 2004, and its current strategies. Since 2000, the company changed its strategies from mass marketing to customisation, and now it has started another big change from product-oriented to customer-oriented and then to relationship-oriented. The executive vice president (EVP) said during the interview that:

<p><i>"...it is not factories that make profits, but relationships with its customers. And it is the company and brand names which secure these relationships."</i> (Interviewee B4)</p>
--

**Table 6.2: Marketing Strategies of Siam City Cement**

<b>Strategies</b>	<b>Prior to 2000</b>	<b>2000-2004</b>	<b>2005 to now</b>
Target Group	Anyone is a good customer	Based on needs, profitability, and future potential	Based on values, relationships, and potential
Value preposition	One size fits all	Tailors to customers need	provides solutions to each customers
Products	Tons	Value-added products and a "cement buying experience"	Brand "Cement Solution Provider"
Selling Model	Transaction based feed the factory negotiate the price	Tailored, depending on the importance of customers	Tailored with better structure using price waterfall
Customer relationships	Golf, entertainments	Based on understanding business needs, total cost of ownership and branding	Attempt to turn interactions with customers into ongoing relationships
Organisation	Marketing & sales department; little cross & coordination with back off support	Marketing & Sales focus on across the company, work together under one controller.	Marketing & Sales has been integrated to work together as a team.
Results	Average margins, slow growth, unacceptable returns, low stock market multiples	Higher margins, growth, returns and stock market multiples.	Expect to establish a strong brand that can win customers hearts and long-term relationships with customers

Source: Adopted from interviews and company's internal documents and reports

The company has recently performed numerous activities that could strengthen its relationships; for example, Insee Junior Camp, Knowledge tour, dealer seminar, and dealer "As I Wish" campaign. The company has also implemented customer relationship management (CRM) software and other applications as an extension from SAP to assist the decision-makers to achieve the company's vision, mission, and goals as well as strengthen their relationships with the customers.

### **6.3 ARA Model and marketing decision-making in Siam City Cement**

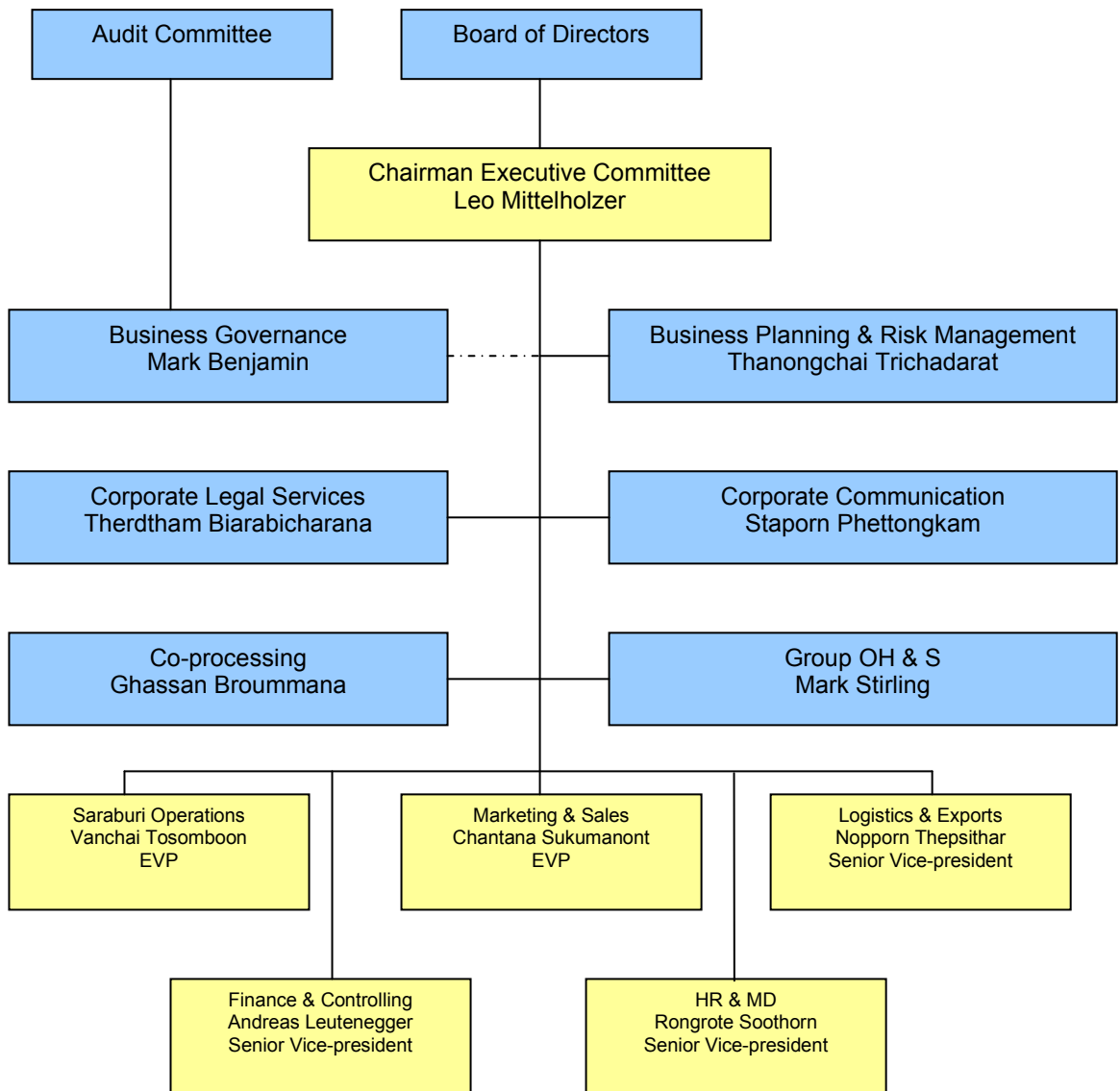
In an organisation, the ARA model can be used to illustrate the interactions between three layers: actors, resources, and activities. After collection, analysis, and interpretation of evidences obtained from various sources such as interviews, internal documents, journal articles, company's websites, and other publications, each layer of the company's ARA could

be described based on the definition presented in chapter 2. Actors are those who make marketing decisions; resources are MkIS including IS/IT tools, humans and their relationships, and physical facilities that the actors utilise to support their decisions; activities are any B2B decisions that the actors undertake. In this case, the actors are represented by the interviewees who were selected based on the method presented in chapter 4.

### **6.3.1 Siam City Cement's Actors**

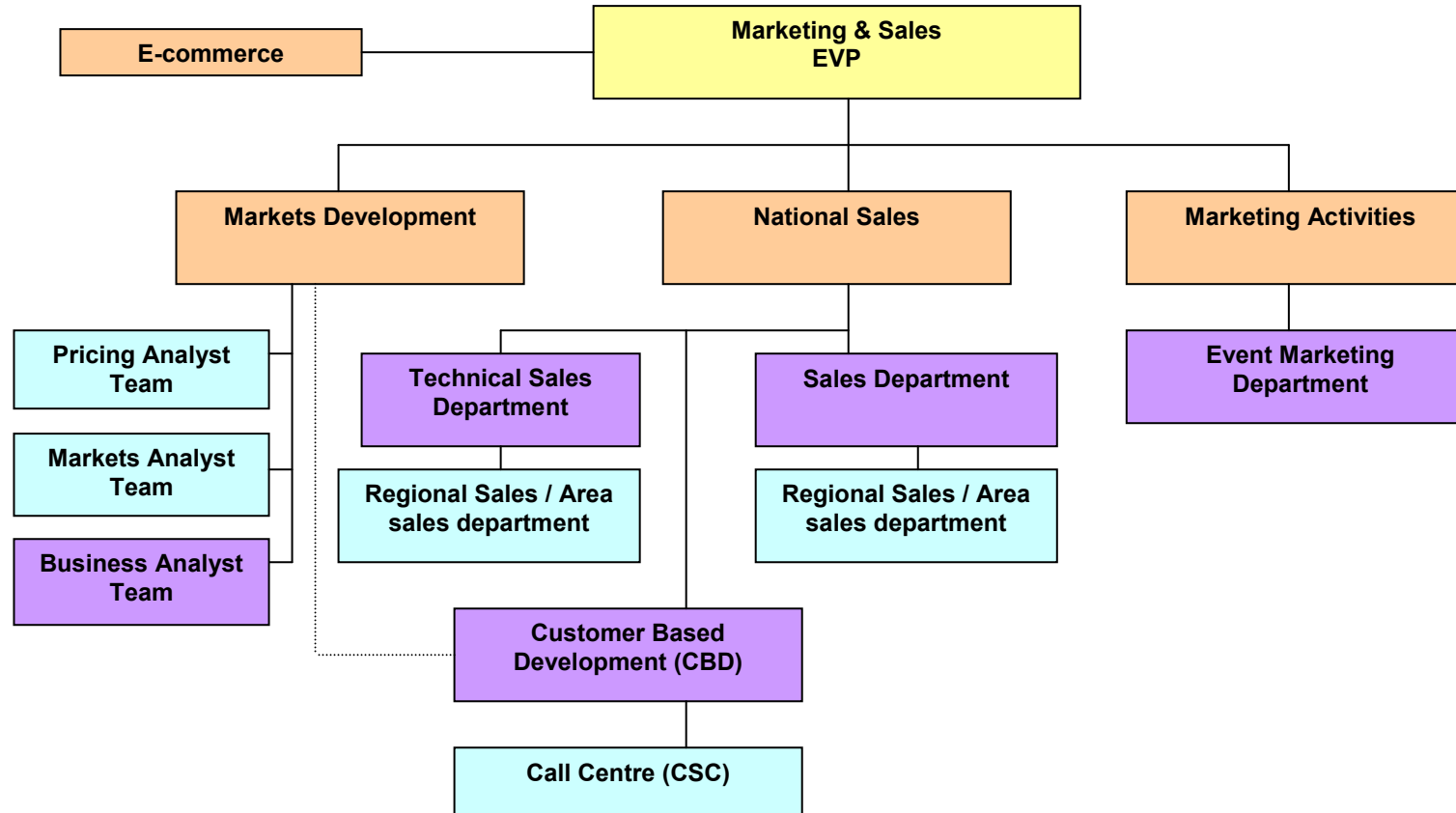
After Holcim became a shareholder and took over management from the founding family, the management structure of the company has changed to be more controllable and to establish corporate governance. The current management structure is presented in figure 6.4. As can be seen from figure 6.4, most managers are foreigners recruited by Holcim; there are also some Thai managers who were educated abroad. The management style, therefore, changed to be more westernised; everything has to be written in English in order to communicate with the foreign management members. The organisation has changed to be less hierarchical, more flexible, and to become a friendly working environment (Interviewee B4). In figure 6.4, yellow blocks indicate executive committees. The Marketing and Sales executive vice president (EVP) is Thai, but was educated in both England and the USA. As a result, she has adopted a western style of management. In other words, those who work in marketing and sales departments such as salespersons, marketing analysts, pricing analysts, business analysts, system analysts, and division managers are forced to communicate in English, and work with a clear job description, targets, and objectives. Supervisors and subordinates are encouraged to work closely together as a team.

**Figure 6.4: Siam City Cement Management Structure**



Source: [http://www.siamcitycement.com/manage\\_struc.aspx?lang=en](http://www.siamcitycement.com/manage_struc.aspx?lang=en)

Figure 6.5: Structure of Marketing & Sales department



Source: Adapted from Interviews information since May 2005



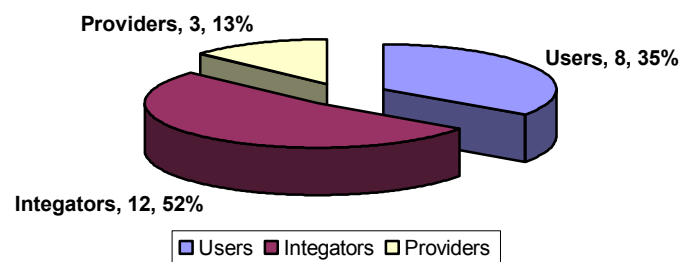
According to the organisational structure above, the only department that deals with all marketing decisions is the marketing and sales department that works under the control of the EVP. The structure of the marketing and sales department is shown in figure 6.5. This department is divided into three major areas: marketing activities, market development, and national sales department. Each area has one manager. The marketing and sales department also has a group of people working in e-commerce. The markets development department contains a market team and a pricing team. The market team consists of business and market analysts and they are divided into several groups on a regional basis. The pricing team makes decisions such as price offerings to each region or customer, special discounts for customers, and they anticipate the cost of products in order to ask permission to increase the price from the Ministry of Commerce.

The national sales department mainly deals with customers, including both agents and businesses. It, therefore, is divided into two divisions: technical sales and regional sales. The technical sales division is responsible for supporting business customers who buy cement to use as raw materials. Regional Sales mainly takes care of the agents and sub-agents. The company also provides customer support via the customer-based development division through its front-end call centre. More than half of the workers in the marketing and sales department work in this national sales department. The Marketing activities department does not directly deal with customers. Their main responsibilities are developing marketing campaigns, event marketing, and activities that build relationships with customers. The officers develop ideas and select appropriate agencies or outsourcers to implement the projects. Moreover, all the IS/IT tools have been implemented according to Holcim's decisions. Thus, in this department, e-commerce managers, system managers, and system analysts maintain the systems, report faults, and develop some interfaces to use internally in response to requests from the users and the integrators. These people could be classified as providers in this case. These people work as a team under "e-commerce" team and report directly to the EVP.

There are 136 people working in various positions in the marketing and sales department. For this research project, 23 of these were interviewed,

17 percent of the total number. The respondents have various responsibilities including managers from each division, analysts, EVP, salespersons, and officers. These respondents fit into three groups: users, integrators, and providers. The lengths of each interview varied from 30 minutes to 3 hours. Most of the interviews were recorded with Minidisks; however, one interview was not recorded because the respondent refused. After interviewing these people, the responses began to show redundancy since the other people are mostly integrators (salespersons, and analysts) and it is very possible that they will respond in a similar ways because salespersons are forced to do the same things and they react in a relatively similar way. Moreover, after transcribing and analysing the data, the results were sufficient to answer the research questions.

**Figure 6.6: Respondents' Characteristics by types**

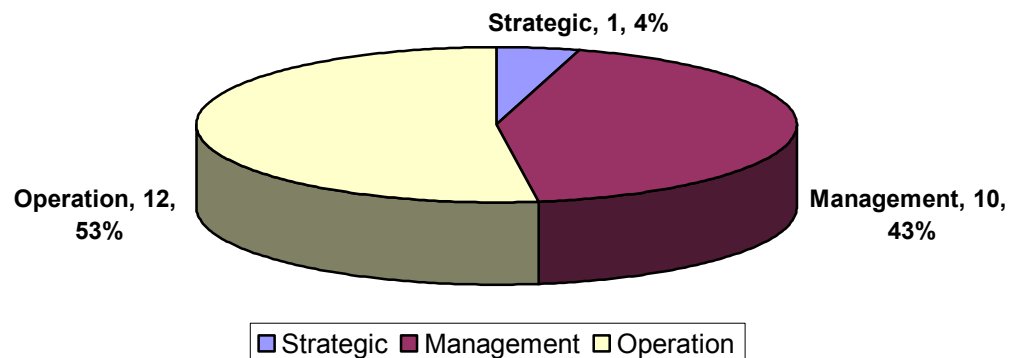


Of the 23 interviewees, three, eight, and twelve people are providers, users and integrators respectively. The providers are responsible for developing and maintaining the systems<sup>19</sup> including coordination with Holcim Service Company. The users only utilise the resources and never input any data into the systems. These include managers in various divisions, key account managers, and marketing officers. The integrators include the EVP and analysts in various teams, such as pricing analysts, market analysts, business analysts, and salespersons. The EVP was classified as an integrator because she makes decisions regarding system implementation as well as utilisation. The users are classified into two groups, analysts and salespersons based on how they interact with resources.

<sup>19</sup> The systems referred to IS/IT tools available within the company; they are described later in this section.

Moreover, figure 6.7 shows that ten out of 23 work in the management level in various divisions, including regional sales managers. One is an EVP who works on a strategic level. The others are analysts, officers, and salespersons.

**Figure 6.7: Respondents' Characteristics by levels of decisions**

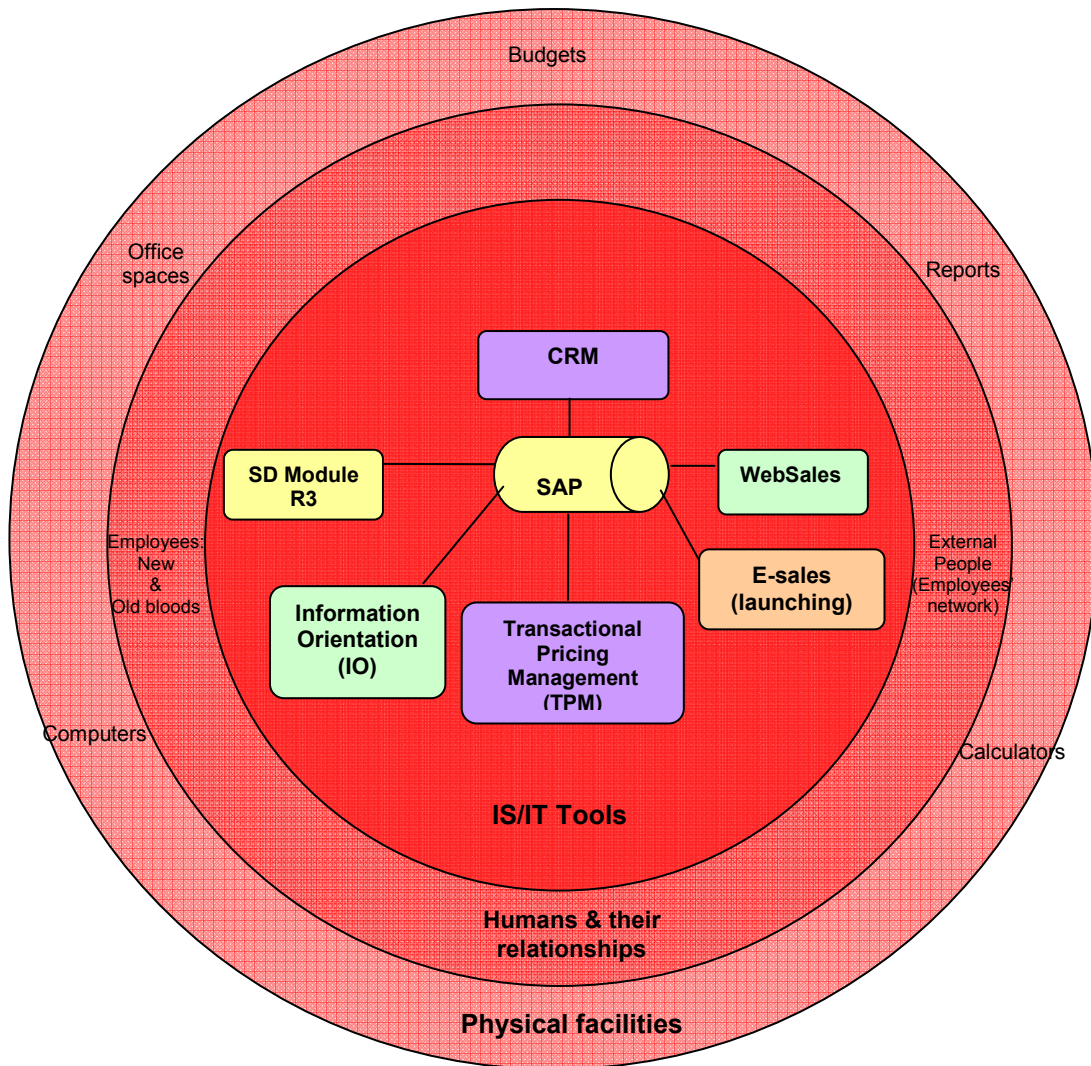


The respondents who work in the management and strategic levels usually have at least five years of experience in the company and perhaps a couple of years of experience working in other industries. The respondents who work in the operational level can be divided into two groups. Members of the first group have worked in the company over ten years and refer to as “old blood”. They survived the lay-off process during the restructuring period, and they very much believe in their experience and knowledge about customers and markets. The other group have been with the company no more than three years, and most of them are recent graduates with master degrees from abroad. These can be called “new blood”. The age of respondents, therefore, varies from 24 to over 50 years old.

### **6.3.2 Siam City Cement's existing resources**

According to the literature review, the resource available in an organisation to support the actors' decision-making are MkIS, and this includes IS/IT tools, humans and their relationships, and physical facilities. Based on this case evidence, existing resources that the actors utilise to support their activities could be classified to match the three categories as shown in figure 6.8.

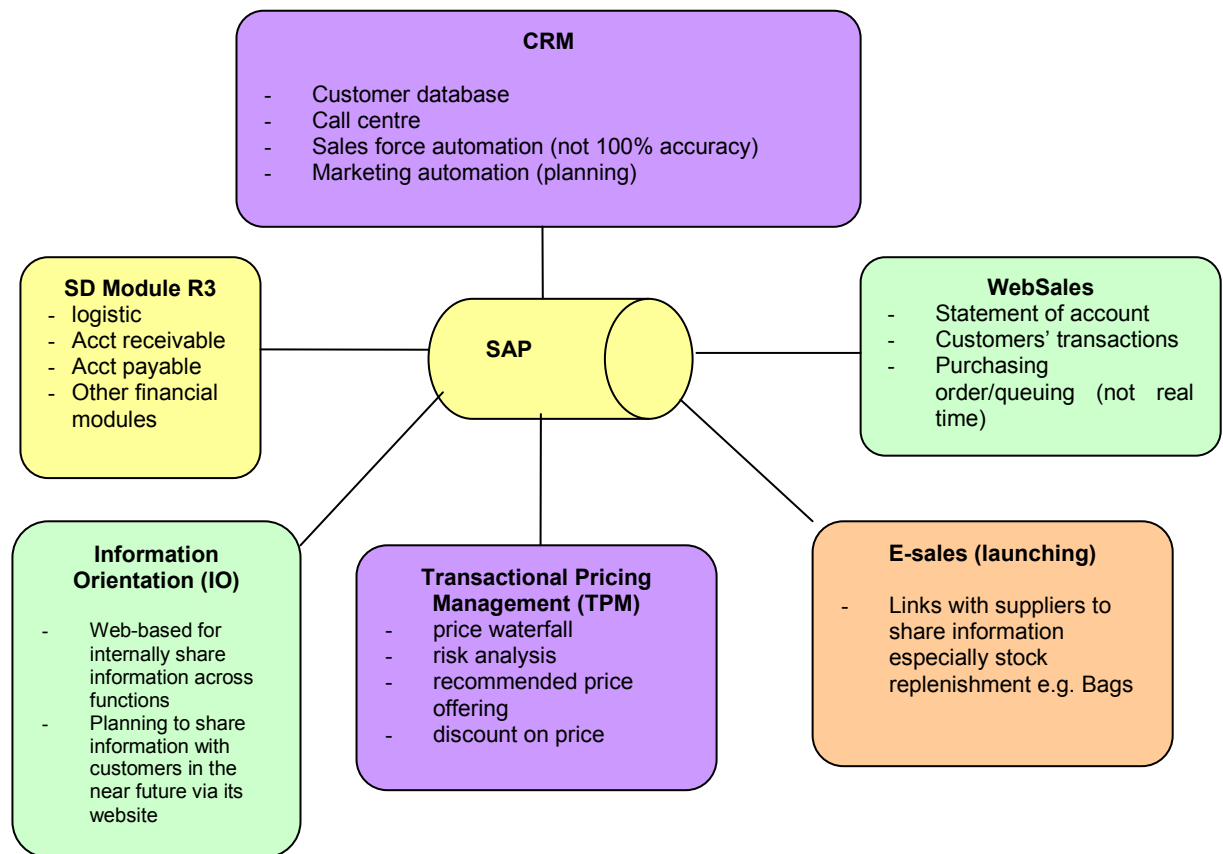
**Figure 6.8: Siam City Cement's existing resources (as of May 2005)**



In this case, the evidence also determined that IS/IT tools are the main resources, while the others are only available in association with the IS/IT tools. IS/IT tools that exist in the organisation are further illustrated in figure 6.9, which has the SAP suite as a backbone and the other applications/tools that have been built around the SAP. It can also be seen as the heart of every function including marketing and sales. In this case, although the comprehensive suite and applications are available and the actors have been forced to make decisions based on data/information available in the system, it sometimes contains insufficient or inaccurate data/information such as supplier details, competitive environment, and end-users' information. The decision-makers then have to gather those data or information from external sources such as the Internet or from their colleagues. Hence, the IS/IT tools could also be divided into internal and

external resources based on their availability. The internal ones are those IS/IT tools that available within the organisation. In this case, they include the SAP SD module R/3, customer relationship management (CRM), transactional pricing management (TPM), WebSales, information orientation (IO), and e-sales. The external IS/IT tools allow the actors to reach the external data/information that did not exist within the organisation; the most important external IS/IT tool is the Internet. Other external resources could include tools that exist in other organisations.

**Figure 6.9: Siam City Cement's existing IS/IT tools (as of May 2005)**



The backbone of resources is the Enterprise Resource Planning (ERP) software designed by SAP. The reason for selecting SAP was to be able to synchronise easily with headquarters in Switzerland. The system is maintained by Holcim Service Company, one of the Holcim subsidiaries, together with internal system managers and analysts. The company has implemented a full SAP suite plus some extra functions and portals such as CRM, WebSales, TPM, and Information Orientation (IO). In the marketing

and sales department, only the Sales and Distribution Module (SD Module), CRM, TPM, WebSales, and IO were utilised, as shown in the figure. All these modules work as a gateway for the providers and the users to access the SAP. Each editor and user has a user name and password with level of authorisation to access the data or information in the database. Within the SD Module, the database contains all basic information, for example, logistics, accounts payable, accounts receivable, and other financial information. Almost everyone in the department has authority to access to the information. This information is currently automatically recorded on a real time basis.

After the implementation of the SAP, WebSales development and implementation followed. WebSales is a web-based technology to enable communication processes between customers and the company, and the system deals mainly with order creation, order/delivery enquiry, customer statement inquiry, and online payment authorisation. At the very first stage of development, it enabled order processing to be faster and more reliable, which allows customers to create orders 24 hours a day via the Internet. Nowadays, WebSales is a tool to share information with customers, including customer transactions' details, past purchases, payment details, creditability, as well as prices. The company currently starts sharing business and industry information gained from the IO system with its customers through the WebSales. This system, therefore, allows the company to communicate and share information with its customers.

The benefits of WebSales include reduced administrative costs, but the company also gains opportunities to gather more accurate data and information from customers' transactions. It also is an effective channel to communicate with customers. The company plans to further develop WebSales to run on a real time basis for all customers. However, more than 80 percent now use WebSales. The others either have no Internet access or do not want to learn how to use the system. The latter are mostly agents or sub-agents in remote areas that may not have electricity.

Along with the development of WebSales, another feature that has been implemented is Transactional Pricing Management (TPM), which is internally used for providing decision-support related to production costs

and pricing guidance to the decision-makers. The TPM offers “Price Waterfall” that assists users to analyse discount components as the system provides actual costs in details. It also especially helps the pricing manager and his or her team to perform risk management and analyse the profit margin in each market. In addition, this feature provides recommended price offerings to each customer, which is used to establish a discount programme. A product will have a set price for every customer, but different customers will be granted different levels of discounts. The levels of discount were normally derived from the TPM recommended price adjusted with marketing information obtaining from market analysts, pricing analysts, and sometimes salespersons. The company is trying to offer the same price to customers in neighbouring areas to prevent competition between their customers. For example, North-Eastern and Eastern regions are connected, and close to the factory where most agents collect products by themselves. Discounts offered to these two regions were different according to the competition in each market. Due to higher competition, agents from the North-Eastern region obtained a higher discount than the agents from the Eastern region, so in the connecting areas, the former could sell “Tickets”<sup>20</sup> to sub-agents in the Eastern area at a lower price, sometimes even lower than the price the company offered to the latter. The sub-agents, therefore, could sell products to the end-users at a very low price. The latter, therefore, suffered from this unfair competition, and they could then request for a further discount to be able to complete with the sub-agents. This kind of story often happens and if the company offered the further discount as requested, the company will make less profit.

Another feature has been recently implemented in the company to enhance their relationship with the customers: CRM, a customer database containing all information related to each customer including family members. Figure 6.10 is an example of a customer record retrieval using the CRM feature. Once the business name or customer number is input, the data will come up on the screen. The first window includes the customer number, business name, and contact details. The middle window shows the contact person or the owners’ details; the details include date of

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<sup>20</sup> Ticket or collection ticket is a copy of purchasing order that is required to collect the product at the factories.

birth, education, position (if not the owner), address, status, and family details. The bottom window presents the contact person's favourites such as colour, foods, fruits, and sports.

**Figure 6.10: Sample of a Customer Record derived from CRM feature**

**Customer Database : The Tool for Improvements**

**Metropolitan Technical Sales**  
BUSINESS PORTFOLIO DATA

Customer Code :	00000001
Name :	NONOCHINE CO., LTD. - Bangkok
Distribution Channel :	Wholesale - direct
Distributor Start Date :	01-Jan-1997
Address :	20 U.S. F. INTERNATIONAL 27 K. MAUTSIA 4.445555 731.03
Telephone No. :	024-511120 024-5011809

**Contact Person Data**

Contact Person :	นายอภิสิทธิ์	
Position :	AD	
Date of Birth :	6 June 1963	
Highest education :	B.A. Oregon Institute of Technology, 1975	
Marital Status :	Married	
Spouse Name :	นายสมศรี	

**Contact Person Favorite**

Favorite color :	Blue, Green	
Favorite food :	Thai Food	
Favorite fruit :	Mango	
Favorite sports :	Soccer, Swimming, Scuba Diving	
Favorite music :	Rock	
Favorite Other :	South East Asia, South Europe, America	
Favorite travel :	Water-sport adventure, Light & country travel	

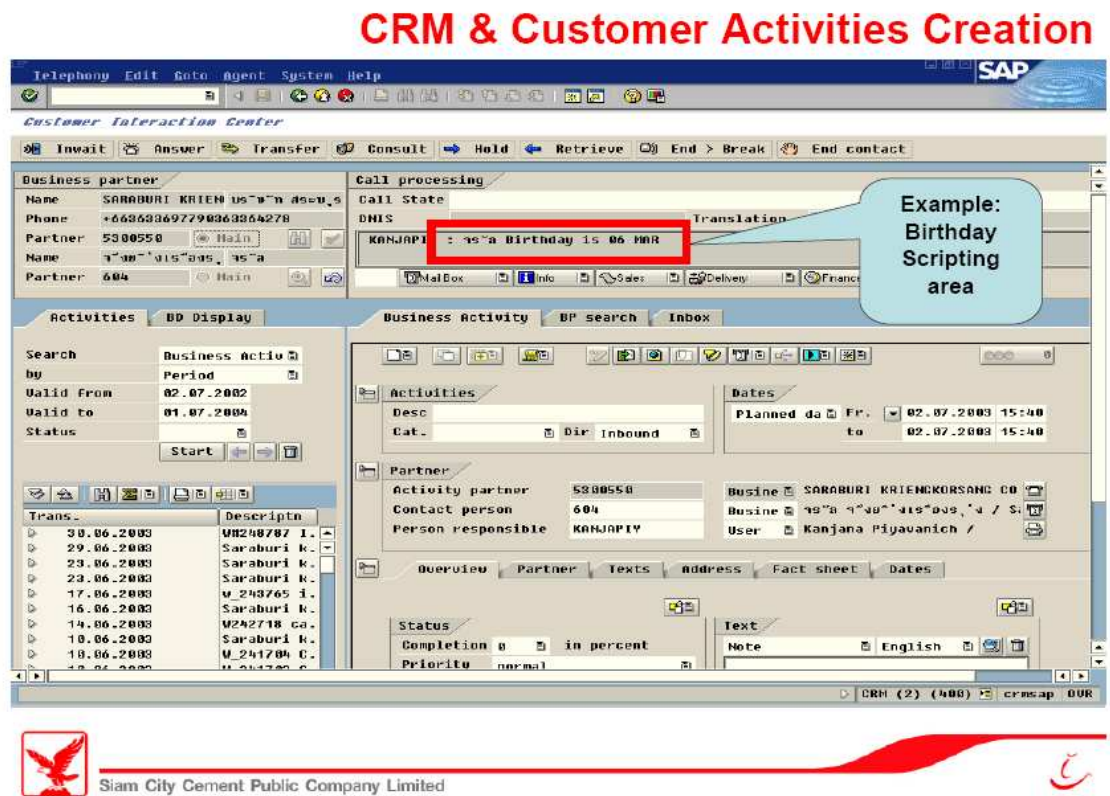
 Siam City Cement Public Company Limited

From the database, the users can also obtain information related to the owner's spouse and children as well as other contact persons. The company utilises this feature in order to build relationships with the customers. The ideal of having the customers' information kept in a database is encouraging; however, it has not yet been kept up-to-date, and some fields were left blank in most records. Sometimes inaccurate information is included due to lack of computer literacy, typos, hurried data entry, or manipulated data. Inaccurate information became a big problem for the company; during an interview with a salesperson, a significant reason for inaccuracies was stated:

*"I sometime have not enough data to input in the database, but to serve the requirement, I have to fake some data and input it in. I did not have the data because the customers did not have time to talk to me during my visit, but the company had made a deadline for me to meet, and I can't just give it a miss." (Interviewee B5)*



Figure 6.11: CRM and Activities Creation Panel



The company marketing activities are currently based on the information retrieved by the CRM panel. Figure 6.11 presents a panel that the event marketing officers use to create activities and invite customers to each one according to their profiles. It also provides the officers with the past activities that the customers were invited to and/or participated in. This feature could be very helpful for the company to ensure that the activities they created are of interest to the target customers, to ensure high participant rate.

In addition to the above features, in order to enhance internal communication, the Information Orientation (IO) system has been developed and recently implemented in the organisation. Before having this system, when a user needed to make a request to a person who has access and/or control over the information, s/he had to communicate via Lotus Notes, and s/he then waited until it had been sent back through the same means. Moreover, sometimes information had already existed in the company; however, it was hidden or spread across various systems. This resulted in redundancy or wasted time spent in looking for the information

again and again. The IO system has been developed in order to gain a competitive advantage regarding sharing information throughout the company.

*“The system has been adopted to use intranet that enable the organisation to store, share, and disseminate information throughout the company.”*  
(Interviewees B2)

The implementation of this IO system contributes to the benefits of the company especially as it eliminates the need to search for information repeatedly, enables the organisation to gain fast access to real time industry news, and provides an opportunity to work in teams on the same documents. Moreover, it is expected that the system will enable dynamic access to all essential internal and external information, delivering a more complete view of an organisation, market, and customers. In other words, the company has attempted to provide access to both internal and external information for the entire organisation in order to ensure that everyone has similar information to support their decision-making. This IO system is developed as an SAP Portal, using Web-based technology. All Web editors and users have their own user name and password. The security system has been enhanced using a standard platform to share information. Web editors from each department have to upload the data before 9.30 am each day. The IO system is recognised as a useful tool for internal operations. It is partially linked with WebSales in order to communicate information to the customers. As can be seen in figure 6.12, the column on the left indicates sharing with the WebSales customers. This column is called “Business Abstracts”, which contains information related to the business and economic environment, company news, and competitor movement.

Figure 6.12: Information Orientation: Internal data sharing

## Information Orientation: Internal Data Sharing



Siam City Cement Public Company Limited



In May 2005, during an interview with the EVP, a new system was mentioned called “E-Sales”. This system aims to enable the communication process and information sharing between suppliers and the company. The system will have similar functions to logistic systems, that is, it will perform real time stock replenishment. This system has however never been mentioned by any other respondents when they were asked about sharing information with suppliers. The company has no other database containing information regarding their suppliers as a respondent mentioned in the interview:

*“...when she had to select a supplier like an advertising agency or a T-Shirt manufacturer, she had to go back to her files: the paper works and hunted for information about the previous suppliers, and then searched for comments from her friends or colleagues about the suppliers. It created somewhat difficulties to select a supplier.” (Interviewee B16)*

The development and implementation of E-Sales could be very useful for the company to keep information regarding all of their suppliers, not only for the regular suppliers as in this initial stage.

Although the company has attempted to implement many systems to improve internal communications, some information required by decision-makers was not provided by the system, such as export figures, competitors' information, and end-users' information. In order to gather this information, the actors may use one of their IS/IT tools, especially the Internet, to search and obtain those required data that were published on various websites. According to the interviews, a few respondents talked about this issue, but the answers showed that they have no demand for this information. The websites these respondents normally visited to gather information were government agencies websites especially the websites of the Ministry of Commerce, the Ministry of Industry, the Customs Department, and the Thailand Fellowship of Cement Manufacturers (TFCM).

Security of information is an important issue, especially sharing confidential information such as pricing. Salespersons and analysts often do not feel that sharing information is secure so they keep the information to themselves or sometimes share it with their colleagues within their departments via Lotus Notes. When others would like to obtain the information, they have to use the traditional method of sending an e-mail to make a request. This happened even within the marketing and sales department, as most of the analysts mentioned in the interviews that they sometimes do not feel secure to share market information or pricing information with the entire organisation as they were unsure who can access the information and how they will use it.

This shows that the company has provided their employees with the comprehensive IS/IT tools to assist their activities to reach the best solutions. The case evidence also indicated that IS/IT tools were the most important resources that the actors use to support their decision-making. However, the actors also utilise other sources when the data/information they required was not available in the systems and/or to verify the data/information retrieved from the systems. Another important source that

the actors referred to during the interviews is individuals who either work in the organisation or not. This resource is included in *humans and their relationships* based on the definition presented in chapter 2. Humans and their relationships include any individuals who are not involved with making the particular decisions; they may have control or access to the resources that the actors required. An individual could be an actor for one decision and a resource for another. This group includes administrators who work in government agencies, e.g. the Ministry of Commerce, the Ministry of Industry, and TFCM, that have access to important statistics that may or may not be published; the actors could use them as a resource by asking them for the required figures, which indeed they need to establish healthy relationships in order to get the information that will not appear in any publications or may appear in some publications but very late. Another example of these resources is the company customers. Marketing and pricing analysts always conduct ad-hoc research with customers to gain or update marketing information on, for example, end-users' preferences, market situations, and competitors' prices. These actors also exercise their relationships with customers to verify data/information available within the systems.

The third group the existing resources in the company is *physical facilities*. Siam City Cement provides its employees with computers or laptops, one for each employee. They also have their own working spaces with access to the Internet, the company's network, and the SAP, the company's central database. Moreover, mainly for uploading to the IO systems, the company also provides these actors with newspapers, magazines, and journals that allow them to gather business and economic news, market data, and perhaps customers' information.

### **6.3.3 Siam City Cement's activities**

As stated earlier, each actor has a clear job description, understands the goals and objectives that they are serving, and know their roles in the organisation. Decisions that they deal with are different according to their responsibilities; the decisions mostly could be classified as *programmed decisions* for each actor due to the fact that they have a specific responsibilities and only deal with them. For example, pricing analysts are responsible for setting prices, discounts, and special offers. These

decisions could be seen as programme decisions because they often recur and the actors are likely to know what information they require and how to obtain it. In these decisions, the actors perform mainly transformation activities as they would have authority to access and control the resources they require. For example, pricing analysts will have access to SAP via the TPM, which will provide them with the decision-supports they require. Sometimes, they may exercise their relationships with colleagues to verify the solutions suggested by the application. This often calls for transfer activities to transfer the knowledge from the person to the actors. Within the interaction between the SAP and the TPM, data might have to be transformed by calculation or manipulation to provide the actors with certain decision-supports; in this case, it shows that the resources themselves perform transfer and transformation activities.

However, the actors sometimes have some unexpected or challenging decisions to make; these are considered as *non-programmed decisions*. These types of decisions are likely to happen in the management and strategic levels, especially the EVP and managers of each division. With these non-programmed decisions, the actors also perform both transformation and transfer activities in order to obtain the decision support they require because they have authority to both control and access almost all resources in the organisation. They may also make decisions based on their intuition which involve transformation decisions.

#### **6.4 Decision-Making and Resources Utilisation**

The company's ARA model was illustrated in the previous section, and now it is time to discuss how the actors utilise the resources when they perform their activities. According to the literature review, the decision-making theory ranges from coherent to chaotic views, the utilisation of the resources can be placed between the two extremes of foie-gras and anarchy. Although the existing resources and its policies may seem to force-feeding the actors, it is often not ideal. The case evidence shows that each actor performed differently depending on various factors that will be discussed later in this chapter and in chapter 8. The actors in this case could be classified into three groups: providers, integrators, and users. In order to illustrate ways that decision-makers utilise the resources, the discussion is divided into three sub-sections according to these groups.

#### **6.4.1 Providers' Decision-Making and Resource Utilisation**

In this case, three providers were interviewed. Although they did not develop the systems, they have implemented them. During the interviews, they sounded very proud to have implemented the systems, especially SAP. They believed that the systems are advance compared to others in the same industry. One of them reported in the interview that:

*"... Our existing information system like SAP and other applications are latest technology, and we were one of the first companies who successfully implemented them." (Interview B1)*

Moreover, the providers also believed that the systems are flexible and contain almost all information that the users may require. The systems were designed to store data and information, both quantitative and qualitative, which integrators and users can retrieve when required. Each user and integrator was allocated a username and password with a certain level of permission to access and manipulate the data. The authorities were chosen on the basis of their responsibilities. Decisions that the providers normally dealt with were, for example, decisions related to level of authorisation, developing new user interfaces, and implementing new systems.

Considering authorisation level, in general, the company provides a standard guide that is applied to everyone in the organisation. The providers normally have to follow the guidelines. Sometimes they may obtain a request to access other areas; the providers then have to ask permission to increase the level from the EVP before granting any authority to the person. When dealing with new user interface development or new systems implementation, the providers have been given requirements from whoever requested the change, which normally is the EVP. The providers, however, have the freedom to design and develop interfaces but they must match the requirements.

Another provider also said during the interview that s/he is very happy to make decisions based on what s/he obtained.

*"I designed the interface according to the requirement given. I was not normally asking other people if they did not work in the same project neither to verify the information nor to obtain some other information. ... I am really happy with this method. If it did not work, they will come up with a new set of requirements. " (Interviewee B3)*

The providers, however had chances to deal with customers, particularly with the WebSales customers; for example, when the customers encountered problems, they contacted the call centre to report the problem, then the call centre contacts the providers who responsible for WebSales. The providers will initially deal with the problems based on the information obtained from the call centre; if it were insufficient, they would then try to obtain further information from the customers. A provider who is responsible for WebSales added that:

*"...when I had no choice, I will talk to the customers who raise the problems. I normally try to contact their salespersons first, and ask them to talk to the customers and transfer the detail to me. I did this because the salespersons must know the customers better than me. ... Although we have customers' data stored in the database, but the relationship would make it different. They may feel more comfortable to talk to the salespersons rather than someone like me who they have never met."* (Interviewees B2)

The providers sometimes had to search for data or information from external sources as well as utilising the existing resources. The way the providers utilise resources is, therefore, not absolutely foie-gras, but it is a hybrid toward the foie-gras way. Figure 6.13 illustrates the way decision-makers utilise resources. The red sun refers to Siam City Cement's providers. According to how they utilise the resources, they attempted to design the systems that feed as much as information to the decision-makers. The providers mentioned that they are encouraged to design and maintain the systems in that way; however, they have few chances to



discuss this with the users (especially salespersons) who mostly work in the other offices across the country.

#### **6.4.2 Integrators decision-making and resources utilisation**

As a result of the interviews, the integrators who generally provide and utilise the resources can be divided into two groups according to their resources utilisation. The first group is those who work in market development and marketing activities divisions, and most of them are analysts. Thus, this group will be referred to as “*analyst group*” in this discussion. The other group consists of salespersons who work in the national sales department. Another member of this group of integrators is the EVP who influences the entire organisation and the way they should utilise resources. The EVP is the one who obtains requirements from the board of committees and then makes decisions regarding what, when, and how to implement them. As she perceived the systems to be very useful, she then encouraged her subordinates to utilise them. She also forced her subordinates to make use of the systems by asking them to write reports or generate decision-support based on information available in the systems.

##### **6.4.2.1 Analysts group’ decision-making and resources utilisation**

This group contains the integrators who mainly are business, market, and pricing analysts. Their main responsibilities are to create reports and make decisions based on what they have obtained from the systems. If the systems could not provide sufficient information, they then start to conduct research to obtain the required data. Research they conducted was mostly to gather market information. Considering the decisions that the analysts have made, pricing analysts are obviously responsible for all pricing decisions, market analysts are responsible for their areas’ market situations and market development, as well as developing new marketing plans to achieve the target sales that the EVP has been allocated. Business analysts have responsibility for overall business updates, assisting the EVP to develop an annual target for each year, and also developing overall marketing strategies. According to the interviews, the results illustrate similar ways of the resources utilisation, which is a hybrid between the foie-gras and anarchy as shown in figure 6.13.

Most analysts had less than five years of experience working in the company. They were recruited to replace the old blood that were laid off, or to fulfil the new positions that occur under the new management system. The latter includes those who work in the market development department such as business analysts, market analysts, and pricing analysts. These people have at least a master degree from fields like business studies and industrial engineering. As a result, they had relatively less experience both working in the company and in the industry. Besides, they are a younger generation who has experience working with computers; the systems therefore provide many benefits to their work. As a pricing analyst mentioned in the interview:

*“... The resources the company provided especially TPM is very useful, it give a good details and sufficient to guide me to make decisions on what price the company should offer to a particular customer. Although, sometime, I have to verify the data whether it is up-to-date or not by go to talk to the customers in my area, or check with market analysts who normally conduct market research at least once a month.” (Interviewees B9)*

Even though the providers were confident that their systems were designed to contain almost every data the decision-makers may require, the analysts have found that they were sometimes given inaccurate information by the system. They, therefore, perform verification at least once a quarter on an ad-hoc basis. After obtaining new data or information, they update the systems. Market analysts conducted market research as they believe that in the dynamic market, situations are changing all the time. They sometimes asked salespersons to distribute questionnaires to customers in order to obtain data. However, it was sometimes useless as the data obtained was ignored by the analysts because they believed that salespersons might have manipulated the data in order to favour their customers, especially concerning pricing information and the competitive environment. They had little faith in what the salespersons gave them. This issue was mentioned in numerous interviews. Once data was obtained that was not stored in the systems, analysts would input and/or update it to enhance information sharing across the company.

Furthermore, analysts rarely had personal relationships with customers when performing market research in their responsible area. They first gather all customers' information from the database, and then verify with the salespersons. After that, if they need to talk to the customers, they will either ask the salesperson to introduce them to the customers or ask the salesperson to gather specific information. The analysts, however, would like to talk to the customers by themselves if they have time, or else they will talk to some important customers and leave the others to salespersons. The analysts, especially market analysts, gather information related to both customers and end-users as they perceived that all are customers of the company. Of course, end-user information such as preference, income, and behaviours was not kept in any systems, but this is very useful to help the customers expand their markets. The analysts gathered the end-users' information by either conducting market research by their teams on a small scale or outsourcing to consultancy companies. Either way they conducted it on an ad-hoc basis.

The IO tool is a new feature that has been implemented to lessen the time it takes to search for market information. It, however, has been rarely utilised. It is a relatively new tool and not much information is available about it yet. It contains only news from newspapers and magazines, which can be read from the Internet or from hard copies. Some stated in the interviews that:

*"I were informed sometime ago about the IO, but I felt that it is similar to what I read from the newspaper, only just select the related news. I think it was not useful for me. ... However, if it stored the old news and link the old one with the new one, it could become a useful tool." (Interviewees B13)*

*"I accessed to it since the trial one; I normally skim through it every morning just to keep myself informed of what has happen in the industry. It, however, was not really useful to my work, as I have to verify the sources as well as the data before I use." (Interviewees B12)*

#### **6.4.2.2 Resources utilisation by the Salespersons group**

In general, salespersons are responsible for taking care of their customers. Therefore, they dealt with decisions related to customer service. For example, when a customer requested a further discount, the salesperson normally should consult with the pricing manager who has the authority. The salesperson had to negotiate with the customer to obtain information and reasons why they need a further discount to be able to convince the pricing manager to grant the discount the customer requested.

In an interview, a salesperson said he normally agreed with the customer about prices in order to be able to compete with competitors in their area. He then promised the customer that he would offer a further discount without asking anyone. Note that he did not have any authority to give the customer a discount. He also stated that he made this decision based on his experience that the customer will not make a request if there is no serious problem, and he will ensure that the customer was granted the discount. In addition, the interviews indicated that other salespersons performed similarly. The findings also showed that salespersons tended to make decisions based on their experience and knowledge, rather than using information provided by the systems. In addition, they believe that they know their customers better than the systems do. They, however, pay attention to the ones they know personally, which may or may not be the biggest ones. The interviews also indicate that they were provided with similar information on each customer, but they treated the information in a different manner; some ignored it, and some used it to initiate relationships with customers.

Although everyone who works on an operational level in Siam City Cement are forced to use the systems, salespersons seem unhappy with this situation. They prefer to make decisions based on their knowledge and experience because they believe that they know customers better than what the system provides. The relatively experienced ones may make the right decisions, but the less experienced ones could encounter problems. For example, an interview with a salesperson who had been with the company for six months revealed that she has no knowledge about her customers at all because the salesperson who took care of her customers

had left the company before she started this job. She had to gather the information from SAP, which gives her some basic information. She then had to make decisions based on the information obtained. She felt it really limited support, and then she started to build relationships with customers starting with the biggest one (in terms of sale volume). After she got to know them better a few months later, she stated that she mostly based her decisions on her knowledge rather than what she was provided.

Additionally, the interviews also pinpoint that salespersons normally learn about their customers from relationships and keep the knowledge to themselves, even though they are forced to use the systems. The other reasons why they dislike the systems is their misunderstanding of IS/IT concepts especially when they were forced to use it. They were given training when they started working in the company, but they still stated that they do not know how to use the systems properly, and that it is easier to keep it in a written form or store it in their PC.

Moreover, according to a company rule, salespersons have to write a report about every visit to customers including information such as time spent, discussion details, and market situations. Sometimes the customers have no time to talk to the salesperson; s/he therefore has nothing to report, but she has to write on anyway. S/he then writes the report using manipulated data and inputs it in the systems. As a result, the company has ended up with inaccurate information, which could cause conflicts of interest in the company. A salesperson said during an interview regarding this situation that:

*"It always happen especially when the customers are very busy with their customers (end-users), no one would like to talk to me. Sometime they even asked me to leave their shops. So, I have to make something up, if not I will be in trouble and no one would like to get into trouble."*  
(Interviewees B5)

All these situations illustrate that the salespersons are more likely to utilise the resources using chaotic or hit or miss-methods i.e. relatively anarchy resources utilisation as shown in figure 6.13.

As can be seen in the figure, two stars with number one and two refer to the analyst group and the salespersons group, respectively. The former utilise resources differently from the latter due to two main reasons. The first reason is the former have recently joined the company and were recruited to replace the old bloods that were laid off due to their inability to adapt to the new systems as well as language barriers. The second reason is the salespersons believe that they know the customers better than the systems; therefore, they use the resources based on their experiences.

#### **6.4.3 Users' decision-making and resources utilisation**

Similar to the integrators, respondents who are classified as users work across three divisions and the interviews indicated that they utilise resources in slightly different ways. The users can be divided into two groups according to how they utilise resources. The first group is the users such as officers, events manager, and marketing activities manager who work in marketing activities. This group of users will be referred to as "the first users group". The other group or "the second users group" is comprised of users from the market development department and national sales department; these users mostly work at a management level and have various responsibilities.

##### **6.4.3.1 First users group decision-making and resources utilisation**

As mentioned before the first groups are those users who work in marketing activities division, they encountered different problems compared to the other groups. The problem was referred to by all of them during the interviews, which is that information that they required mostly is not stored in the system. Only information related to customers is stored there. This is surprising especially when compared to the statement made by the providers that they believe that their systems collect and store all information that the entire organisation may require. The missing information is mostly related to suppliers. Although the EVP mentioned E-sales during the interview, this group of the users was unaware of it due to the facts that the E-sales is very new to the organisation. Therefore, when they required information regarding suppliers, they usually went back to the paperwork and searched for the particular suppliers to get information regarding the previous orders.

These users rarely obtain information or feedback directly from the customers; they normally gather feedback from salespersons. In order to choose a supplier to produce a set of marketing materials, for example, T-Shirts, the officers need to give suppliers a call, negotiate with them, check the sample, design, and so on. All these steps can be seen as routine decisions, since for each order of T-shirts they may have to make this decision. However, they need to ensure that the quality and colour will be right as they never have this information stored anywhere. Therefore, they repeat all the steps again and again as interviewees mentioned.

*“... It was sometime difficult to obtain suppliers information including contact details; I had to go through a pile of files to search for it, start contacting them, and make requests for sample and quotes. After shorten the lists, I will then propose them to my boss for the approval.” (Interviewee B16 & B17)*

Apart from marketing materials, the marketing activities department is also responsible for creating activities to entertain and establish relationships with groups of customers. The company allocates annual budgets for the division to spend on marketing activities and materials. The budget is huge but still quite tight compared to expenses for each activity. The users, therefore, have to carefully make decisions on which activities will generate the best results. For example, an English camp for Insee Juniors aims to build long-term relationships between the company and its business partners. Within a budget, the company could not afford to pay for everyone who would like to join the programme. In order to avoid problems, the officers who take care of the project will send invitations to only selected customers. They then require customer information to choose the most appropriate ones starting with age and then value of the customers. The users, however, know that the customer information is not really up-to-date; they then have to discuss with salespersons before sending out the invitations. An officer stated in the interview that:

*"I know that my lists obtain from the database was not really accurate, so I have listed more than the places. Just in case, I may have to change to invite the others as the children may not be available or over age. I then show the lists to salespersons and verify that they were appropriate to join the activity as I know the salespersons would know them better than me."* (Interviewee B16)

These sorts of situations were mentioned many times in the interviews, which indicate that the information the systems provided was insufficient or inaccurate for them to make their decisions. This means that they have to search for information from both internal and external sources. After they were asked about the situations, they then were questioned on their satisfaction with the systems. The answers were quite a surprise, as they seem to be satisfied with the current systems. They said that it is easy to obtain the required information from various sources and they do not have to worry about keeping systems up-to-date and verifying the information. These illustrates that the first user group is utilise resources in a relatively anarchic way. A red smiley face in the figure 6.13 refers to the resources utilisation of the first group.

#### **6.4.3.2 Second users group decision-making and resources utilisation**

The second user group is the managers in each division in the department. Most of them have relatively high experience working in the company and the industry, i.e., more than five years of experience working in the company. Some have been with the company over ten years and have gone through the economic crisis with the company. They have gained enormous experience working in the company, and they were well informed about the systems. They, however, rarely use the systems by themselves; they normally ask their subordinates to generate reports for them. They trust their subordinates to come up with accurate decision-supports. Therefore, they make decisions based on the information they obtained from the reports and their experiences.

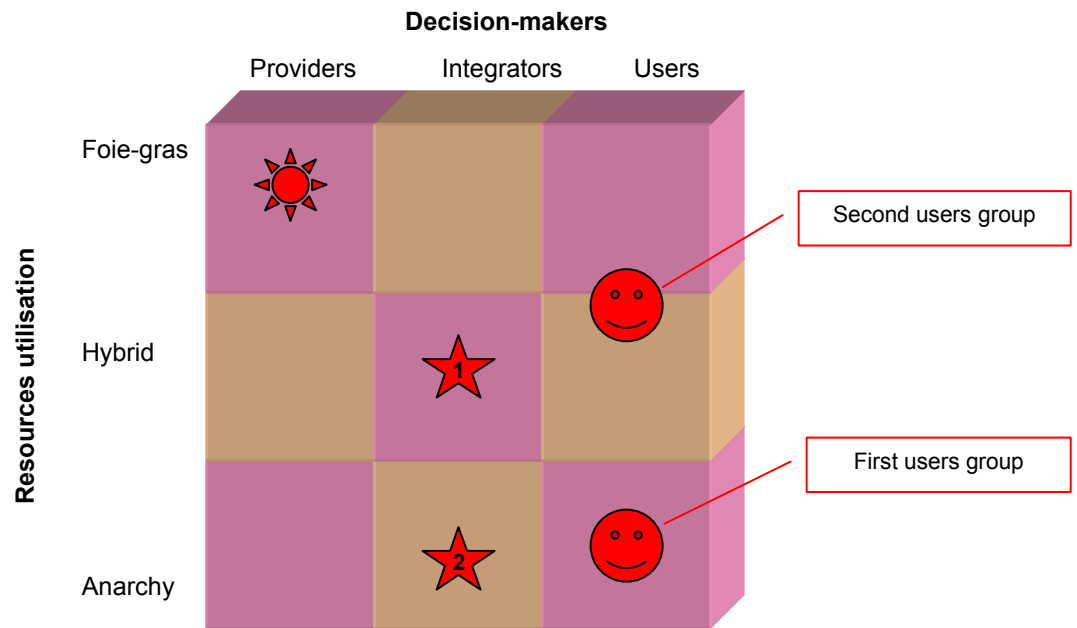
*A regional manager stated that "I knew that the information stored in the system were inaccuracy. I, therefore, asked salespersons under my supervision to write reports or arrange a meeting to exchange the information with them regularly." (Interviewees B23)*



If the reports were created by others such as a salesperson and submitted to the pricing manager, the situation was totally different. The managers will verify the information by comparing the salesperson's report with the other subordinates' reports or conducting research to collect and verify information as well as generate the decision-support, which takes time and money. It was sometimes too late to settle the customers' requests. Regarding this situation, managers mentioned that before they make any decisions, they would like to know that it is a real problem and not a favour that the salespersons would like to offer to their customers. Another decision under this group's responsibilities is recruitment of salespersons, officers, or analysts. The company has a human resources department, but it is also the responsibility of these managers to interview and select their new team members. This kind of decision was made using information obtained from application forms and CVs: e.g. qualification, personality and experience, expectations of the manager for the new team members, and also recommendations or references. The latter seem to have the most influence. If the candidate has been recommended by someone they knew, they were likely to be recruited.

Evidence from the interviews suggested that the users seem happy with the situations and make decisions based on the decision-support given that they could digest it using to their knowledge and experiences. Therefore, the resource utilisation is mostly a hybrid leaning toward the foie-gras end as indicated in figure 6.13. Each group is comprised of the respondents from the main three divisions: market development, national sales department, and marketing activities. The respondents from the national sales department acted slightly differently from the others when they utilised the resources to support their decisions. Figure 6.13 illustrates the ways the actors utilise the resources to support their decision-making. The figure indicates that the providers are more likely to employ the foie-gras in utilising the resources, shown by the red sun. On the other hands, the integrators and users are more likely to combine the two methods when exercising resources. The red stars and the red smiley faces represent the ways the integrators and the users utilise resources, respectively.

**Figure 6.13: Siam City Cement's Decision-making and Resources utilisation**



### 6.5 B2B-related Factors influence the resources utilisation

According to the literature review, there are four B2B-related factors that may have influence ways decision-makers utilise the resources. These factors are (1) number and value of customers, (2) supplier-customer relationships, (3) nature of demand and (4) types of networks. Based on this case evidence, three of them produce strong influences. The three factors are number and value of customers, relationships with suppliers and customers, and nature of demand. While the type of networks was found to produce relatively no effect on the resources utilisation of the overall decision-makers, it does influence some users. Each of these factors influences the resource utilisation of each group of actors differently.

Number and value of customers could be considered through the power of the customers as explained previously in chapter 2 and 3. The actors of Siam City Cement valued their customers differently, which is similar to the statements of Ford (2002: 5), and Dwyer and Tanner (2001: 8). Hence, the power of customers depending not only on purchased volume or on share of the customer toward the company's annual income, it depends more on the actors' relationships with the customers. This case evidence showed that each actor has a different view or definition of customers. Every respondent was questioned to identify his or her customers. The answers

were distinct and the customers in this case could be classified into two groups: external and internal customers. External customers are those customers who purchase the company's products, i.e. company's customers and the end-users or consumers. Internal customers could be any internal people that the actors worked for or reported to. The power of the former depends on their relationships with the actors and the company as well as the importance of the customers based on the company's own classification. The latter's power depended on their authority to give rewards and/or punish the actors.

In the providers' point of view, their customers are the EVP, their bosses, and the users of the systems<sup>21</sup> because they worked to satisfy these internal people, especially the EVP and their bosses, rather than the external customers. The EVP and their bosses have greater power compared to the other customers because they could either reward or punish. In addition, the providers mentioned that they designed, developed, and maintained the systems according to the requirements, which were provided by the EVP and their bosses. As a result, these people influenced them to utilise the resources in a relatively foie-gras way.

The two groups of integrators—the analysts and the salespersons—also viewed their customers differently. The former thought that their customers are both the company's customers as well as the end-users, although some of them also discussed their internal customers such as the EVP, their bosses, and their colleagues. In the salespersons' opinions, their customers are only the customers they dealt with, and no one else. This resulted in very different ways of utilising resources because each customer has different pressure on the decisions. However, common to everyone is the idea that the higher value the customers is, the more carefully they would make the decisions. The analysts, then, are more likely to make decisions based not only on the information provided in the system, but also search to verify the data and gain some additional support, which is a relatively more anarchic process. Similarly, salespersons are more likely to know their high value customers and they make decisions based on their knowledge and experience rather than the information

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<sup>21</sup> The users of the systems include any actors who are classified as users and integrators that use the systems to generate decision-support.

provided by the systems. However, the analysts were forced by their bosses to produce reports and make decisions based on the information, which most of the time was inaccurate. For example, an analyst mentioned in the interview that:

*"I knew that the data was not 100 percent accurate, but I had to use them to produce a report, what I did is put a remark express my opinion that it was not right. And I sometime proposed to conduct research to verify the data." (Interviewee B12)*

The users are also divided into two groups. Both of them have acted differently in resource utilisation. This is partly caused by the power of the customers. The first group is the marketing activities people. In their opinion, their customers are external customers such as the end-users and the company's customers. No one in this group mentioned internal customers. Moreover, their responsibilities more or less are to establish relationships with the customers and also build brand awareness for the end-users. The evidence showed that the end-users were unlikely to create pressure on the actors' decisions. On the other hand, the company's customers—agents and sub-agents—were more important in their point of view. The customers, therefore, have greater effects on decision-making. In making decisions regarding customers, they really have to be careful not to upset them. They put more effort in searching for information to support their decisions within a certain time. That is to say, they attempted to verify the data obtained from the database using more of an anarchic method. As the company provides less information regarding the end-users, they sometimes have to ask the analysts for the information they required, which is currently shard in the IO system. These situations illustrated that the number and value of customers influenced the first users group's resource utilisation; the higher value the customers are, they tend to utilise resources in a more anarchic way. Considering the second user group, the managers have relatively more experience than the first group. The interviews indicated that they were unlikely to gather information by themselves. However, this shows that the value of customers could produce similar effects on their resource utilisation:

*"When I had to make a decision regarding a big customer, I generally started with asking salesperson to gather information from the customer and then arranged a meeting with them. After that, I normally verified the information with the other salespersons who work nearby. If the decision were very sensitive, then I would search for more information from others such as market analysts, consultants, and other external sources, only to ensure that I will make the right decision. .... On the other hands, decisions regarding a relative less important customer, I normally relied on salesperson's reports and make the decision based on them."*  
(Interviewees B17)

Based on this evidence, a conclusion could be made that value of customers produced a significant impact on the way decision-makers utilise their resources in supporting their decision-making. These findings contradicted proposition one which proposed that the power of customers depend on number of customers, but it corresponds with the idea that the higher value of the customers are, the more anarchic way the actor would use. The relatively higher power customers could influence the providers to utilise the resources leaning toward the foie-gras end. Conversely, this could affect the integrators and the users to utilise the resources in a more anarchic way.

As a result of the company's marketing strategy, *supplier-customer relationships* produced a great effect on resource utilisation, especially relationships with customers. The evidence showed that the company classified these relationships based on the period of time they have dealt with each other, not on how well they are integrated, as discussed in the literature. This may be because they are linked and share information with most of the customers via WebSales. They also will have E-sales to share information with the suppliers. These showed that they are integrated with suppliers and customers based on a linear value chain; suppliers are linked with the organisation and organisation linked with the customers, but the suppliers did not link with the customers. This integration provides the actors with certain information regarding transactions, purchased volume, and credit flow in and out. This gives the actors the information and may allow the decision-makers to make programmed decisions. That is to say,

it may lead the actors to utilise the resources leaning toward the foie-gras way, but the influence of this integration was not clear since the actors were acting differently due to reasons like insufficient information, lack of confidence in the information in the database, or lack of confidence in themselves. Thus, it is difficult to draw a conclusion on how the type of relationships influences the way the actors utilise resources.

The situation becomes clearer when relationships were classified based on period of time as the company did. The relationships could be classified into short-term or distant customers, and long-term or closed customers. The long-term customers are the ones that have been regular customers for a few years, whilst the other are considered short-term. However, relationships between actors and customers are either distant or close relationships, which are very subjective categories; the actors may feel close with the one they have just met. Customer relationships<sup>22</sup> were found to have relatively less effect on the providers' decision-making as they designed, maintained, and developed the systems based on the requirements. It is, however, totally different for the integrators and the users. For both groups of integrators, the relationships with customers influence their decisions in such a way that the closer the relationships they have with the customers, the more anarchic way they would utilise the resources. In other words, both salespersons and analysts, once they establish relationships with customers, tend to make decisions regarding the customers based on their knowledge and not the database. This was not a surprise for salespersons as they deal directly with the customers, but it happened also with the analysts. This could be caused by the fact that they knew that the information retrieved from the systems was somewhat inaccurate. Similarly, with both groups, once they have a chance to know the customers and establish either business or personal relationships, the decisions are more carefully made using both their experience and other information they could find to support their decisions. Based on these findings, it can be concluded that the actors utilise resources leaning toward the anarchy end when dealing with decisions regarding customers with whom they have established long-term or closed relationships which is similar to the proposition 2.

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<sup>22</sup> Customer relationships here refer to relationships between the company and the customers and do not include the internal customers.

Another B2B factor that affects resource utilisation especially on the analysts and the first user group is *nature of demand*. As defined in chapter 2, nature of demand is determined by whether it was derived either solely from customers or from both customers and end-users (Haas 1976: 21; Kotler 2001: 216). Evidence illustrates that the demand for cement is derived from both customers and end-users, especially in the domestic market. As stated before, in Thailand, cement could be considered a seasonal product, the end-users' demand is very different between high and low seasons. The former starts around December and finishes in early May in the following year. The demand for cement from contractors, however, could vary all year round according to the government spending on infrastructure. When the decision-makers, especially the analysts, require information related to demand, they may have to gather information from external sources such as government publications, newspapers, or the Internet. In contrast, they could utilise historical data to forecast the end-users' demand. It is similar for the foreign market. Hence, the nature of demand affects the resource utilisation of the integrators as well as the users who have responsibility for sale figures.

In contrast, the nature of demand was irrelevant to the way the providers utilise the resources due to the fact that their responsibilities were related to neither the customers nor the end-users. In sum, the nature of demand affects the way the integrators and the users utilise the resources, such that if the demand was derived from end-users, more haphazard methods were employed i.e. they would utilise resources in leaning toward the anarchy end. If the demand was not derived from the end-users but from the contractors, information could be obtained from the IO system, which generally contains all information regarding the government budget and projects. These results corresponded with proposition 3 presented in chapter 3 except for the providers as their responsibility was not related to the demand for cement.

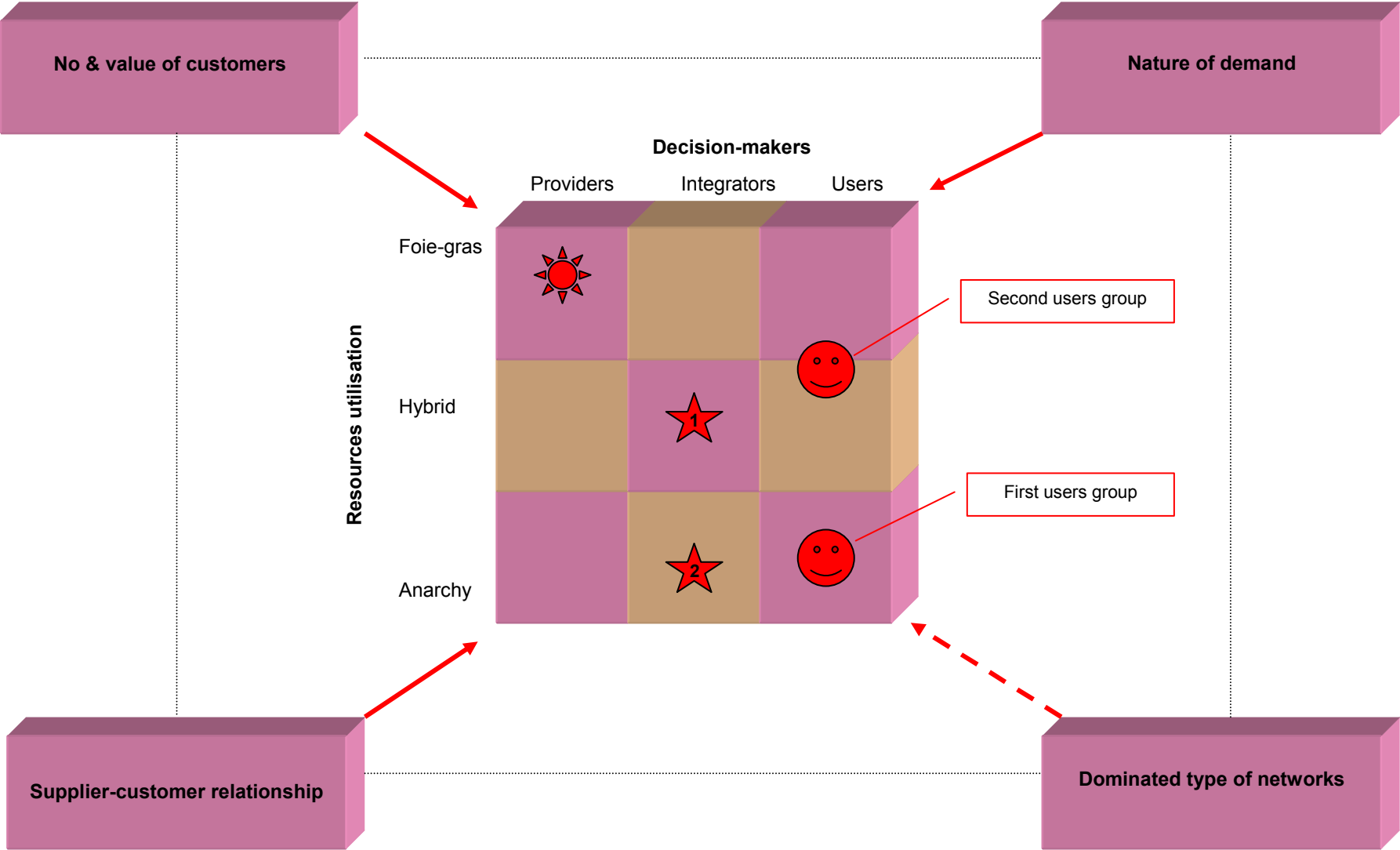
According to the market structure, Siam City Cement's *dominant type of networks* could be classified as a distribution network as the company uses many channels to distribute their products (Ford *et al.* 2002: 32-33). Some customers could become suppliers to other customers as well as suppliers to the company, which could make these customers more important than

others. Only one or two customers became suppliers to the company as a part of the logistic system. Similar to proposition 4, the type of networks was somewhat related to the way the first users group utilises the resources; however, they were only 13 percent of the total respondents, making it difficult to draw a conclusion from the limited evidence. The suppliers' network was neglected by the company, as their system is integrated with few suppliers by E-sales, which was relatively no used in the marketing and sales department. The users, therefore, have to search for information by themselves, which is totally anarchy.

Based on the discussion above, a framework could be drawn as in figure 6.14 to illustrate how the actors utilise the existing resources to support their decision-making as well as identify B2B-related factors that influence the resource utilisation of the decision-makers. As can be seen in the figure, the red arrows are drawn from three factors, namely, number and value of customers, supplier-customer relationship, and nature of demand. This shows that these factors have a great influence on the resources utilisation. On the other hand, a red dash arrow indicates some influence but the influence could not be definitely determined. All in all, these B2B factors could be seen as interrelated factors that could influence how the actors would utilise the resources.



Figure 6.14: Siam City Cement’s Resulting framework



## **6.6 Conclusion**

Siam City Cement is a Thai company with a relatively Western management style as the management teams are mostly foreigners or recruited by Holcim. The company has invested enormous amount of money to implement the SAP and other applications to improve the communication flow internally and externally and also to support the entire organisation's decision-making. Some respondents, however, stated that the information provided by the systems was insufficient and sometimes inaccurate. Hence, the resources in this case are fitted in the three groups: IS/IT tools, humans and their relationships, and physical facilities. Given the huge investment into the comprehensive IS/IT tools, the EVP has forced her subordinates to utilise this resource to support their decisions with the belief that it gives the most accurate information within a timely manner. The actors could also be divided into three groups: providers, integrators, and users, and they utilise resources in different ways that lay between the continuum of the foie-gras and anarchy.

All four B2B-related factors were found to influence the resources utilisation of the actors to different degrees. The value or power of customers influenced all the actors, yet in different ways, which contradicts proposition 1. Moreover, the nature of demand has produced great effects to only the users and the integrators. Other factors such as experience of the decision-makers, relationships within the organisation, and management styles also shape the resource utilisation, which will be discussed later on in chapter 8. Evidence from this case provides a good illustration on the interactions of the actors and the resources where the company provides a comprehensive set of resources, and forces them to use it. As a result, there were some actors that are not happy with these situations and that seek alternatives.

## **CHAPTER 7**

### **CASE STUDY: THAI OLYMPIC FIBRE-CEMENT COMPANY LIMITED**

#### **7.0 Introduction**

This chapter aims to provide evidence found from the last case of this study: Thai Olympic Fibre-cement Company limited. Olympic is a member of the Mahaphant Group is responsible for the group's marketing activities. The group supplies fibre-cement products to both domestic and foreign markets with two main product lines: roof-tile products and artificial wooden materials. These two product lines indicate that Olympic is in the construction materials industry, which is related to the construction industry. Its customers are also similar to the Siam City Cement's customers, who are retailers, wholesalers, and contractors, yet the company does not have any customers who purchase their products to use as raw material. Moreover, the company also works in a similar environment with Siam City Cement which is both supplier and competitor of the company. The company, therefore, suffered from the economic crisis just as Siam City Cement did. In order to illustrate the resource utilisation of the decision-makers in the company as well as to identify factors that influence the ways they utilise the resources, this chapter starts with a brief background of the fibre-cement industry and the company, followed by an illustration of the company's three layers of the ARA model: Actors, Resources, and Activities. Furthermore, a discussion on how the actors utilise the existing resources to support decision-making is shown. After that, factors influencing resource utilisation are then identified and discussed. Finally, a conclusion is drawn in the last section in this chapter.

#### **7.1 Background of Olympic and Thai Fibre-Cement Industry**

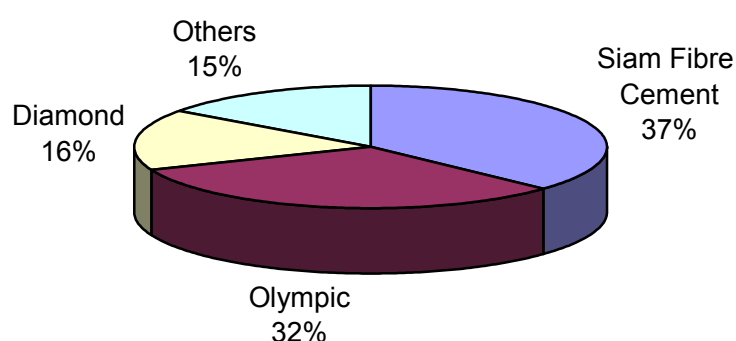
Olympic was established in 1974, and was the first company in the Mahaphant group. It is as the sole marketing arm of the group and primarily manages their products' positioning, distribution networks, as well as performing broad arrays of distribution and technical services. It also cooperates with the other members of the group in order to perform new

product development. The group initially was founded by a family and named according to their family name; it remains a family-run business. The group offers fibre-reinforced roofing materials and wallboards, which are marketed under a trade name, "Ha-Haung". These include roman and corrugated tiles with all the accessories, flat and patterned sheets, and the latest innovation is "Ha-Huang Trilon", a new style of roofing tiles. The group also invents and manufactures embossed Shera planks and other products known as "Artificial wood" sold under the name "Shera". Another product line of the company is concrete roof tiles which are marketed under the name "Magma Ha-Huang" as well as Gemrox artificial stones. The company's philosophy has been changed recently to comprise three ideas: originality, surpassing expectation, and being good global citizens. Previously creativity and innovation, and beyond the local were the company's buzzwords (Mahaphant Group Ltd. 2005). Creative and innovation has become originality as it aims to inspire new products and services (Mahaphant Group Ltd. 2001; Mahaphant Group Ltd. 2005). Beyond the local has changed to be beyond expectation to show the company's intention to give extra values to its business partners and the end-users (Mahaphant Group Ltd. 2001; Mahaphant Group Ltd. 2005). Moreover, it has added another idea, which is to be good global citizens, to encourage people especially in its organisation to learn to live in harmony and to make a business that respects nature and humanity (Mahaphant Group Ltd. 2001; Mahaphant Group Ltd. 2005).

Customers of the company could be classified into two groups, the dealers and contractors, depending on their purposes of purchasing the products. Dealers are those who purchase the company's products to re-sell to end-users. The company has dealt with more than 800 dealers and sub-dealers and over 3000 retail stores regionally, including the neighbouring countries of Greater Mekong and Taiwan, which contribute to approximately 95 percent of the company's revenue sales. Most of these dealers are also Siam City Cement's customers; a few of them are customers of the other cement producers but not the Siam Cement due to the fact that Siam Cement has contracts with its customers to sell only the products from the Siam Cement Group. The other five percent generated from direct sales to the latter group of customers which include contractors, builders, and design companies. Although the company has foreign customers, they

contribute a minimal value to the company revenue sales. The company offers various products to the market under two different trade names—Ha-Haung and Shera—to show the two main product lines of the company: roof tiles and artificial wood. Roof tiles were introduced to the Thai market almost 70 years ago. Siam Fibre Cement was the first company established to fulfil the domestic demand; previously, these materials were imported. The product development was relatively slow during the first 48 years, starting with roman roof-tiles with natural colour and then plain colours like navy and brown. After Olympic entered into the market, more choices were offered to the end-users, for example, different thickness (4 mm and 5 mm), and vivid colours (different shades of green, blue, and red). After the roman roof-tiles, other roofing or ceiling products were developed in the industry. These products are corrugated tiles, concrete roof-tiles, flat sheets, pattier sheets, and Louvre. Almost every company in the industry produces roman tiles, corrugated tiles, concrete roof-tiles, and flat sheets. Only Olympic and Siam Fibre-cement offer the pattier sheets and Louvre. In this case, in order to be able to illustrate each company's market position, only Roman-tiles (the main product) were calculated. As can be seen in the figure 7.1, three main players in the industry are Siam Fibre Cement, Olympic, and Diamond Roofing Tiles, with 37, 32 and 16 percent of the market share, respectively. The other 15 percent was shared among small companies.

**Figure 7.1: Roof-tiles Market Share**



Source: extracted from interviews

Another product line, artificial wood, is made of fibre-cement materials that laminated real wood, which was introduced into Thai market about ten years ago. It was initially developed for decorative purposes; however, end-users especially in rural areas have used it to replace real woods where appropriate such as in walls and ceilings. The market is vital as a part of environmental concerns, particularly regarding wood conservation. The Thai people especially in the rural areas mostly use wood to build houses; therefore, they are the main target for artificial wood to fulfil this demand. Artificial wood initially could only replace walls and fences as they are normally built by thin pieces of wood. Now it is used to replace floors, ceilings, and the structure of the houses. Producers are attempting to develop the product to be able to completely build a house with it (Interviewees C1, C2 and C3). In the last three years, the market has developed relatively fast and it is now worth more than 700 million Baht a year or approximately over 10 million GBP per annum. The market growth was at least 40-50 percent each year. Olympic was the first company to launch the products and it was initially under the brand of “Shera Ha-Huang”; it has now changed to be only “Shera”. Soon later, its main competitor, Siam Fibre Cement, introduced its products under their well-known brand “Chang”. The other competitors also launched their products years later. Nowadays, four major brands are in the market, which are produced by the main players in the roof-tiles industry and one more, which is a new member of Siam City Cement group: Conwood. Hence, the main players in this line are Olympic, Siam Fibre Cement, Conwood, and Diamond Roofing Tiles, under different brands of Shera, Chang, Conwood, and Pech, respectively. The market leader is Shera, which has become a generic name for the product since its introduction. Chang is the challenger, followed by Conwood and Pech. There is no exact market share for each brand, but Shera has approximately 50 percent of the overall market, which contributes over 350 million Bath to company revenue, representing over 100 percent growth from the previous years (Interviewees C5 & C16).

## **7.2 ARA Model and marketing decision-making in Olympic**

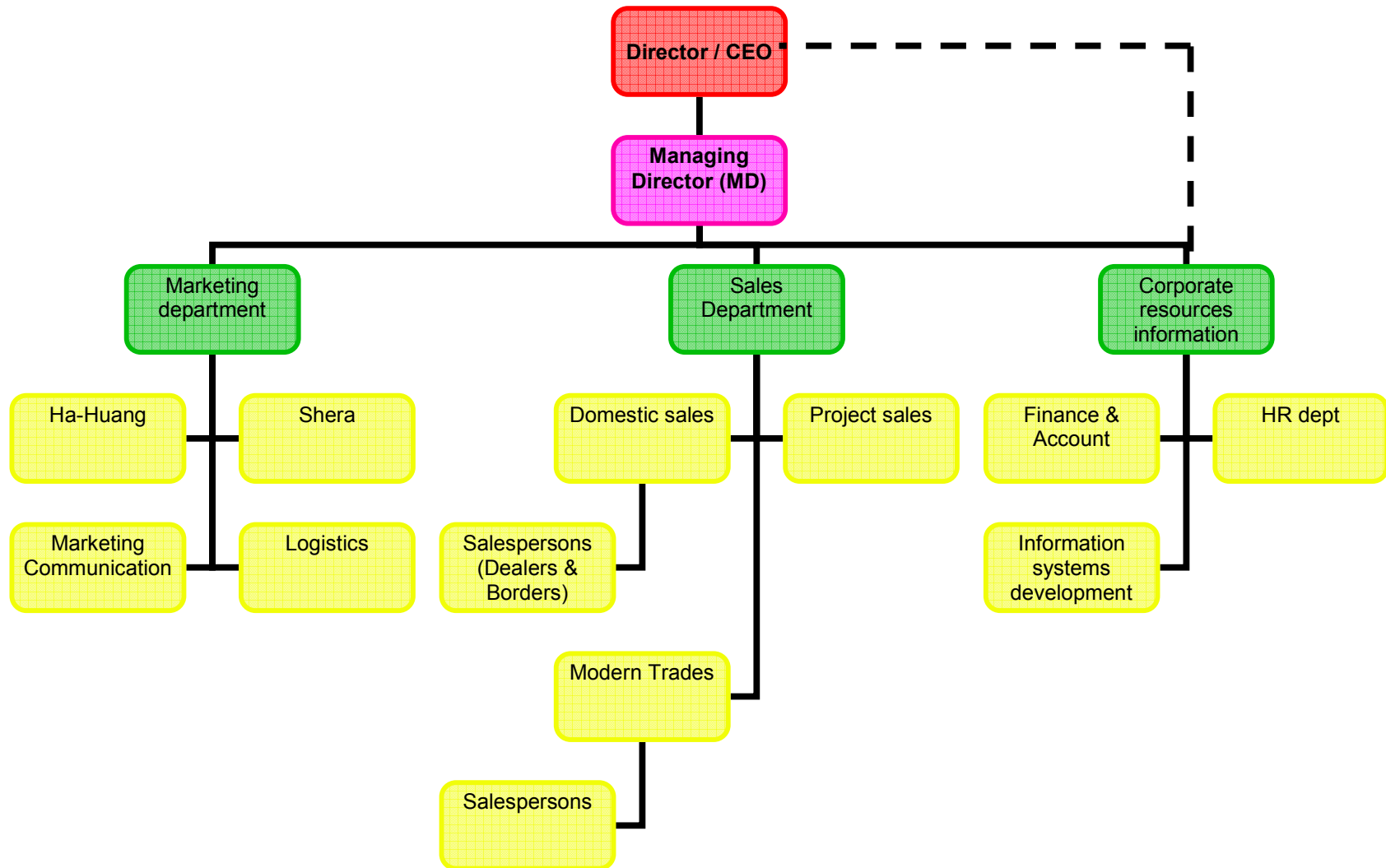
The ARA model could be drawn for any organisation in which people perform an activity. The ARA model comprises three layers: actors, resources and activities (Hakansson *et al.* 2002; Hakansson *et al.* 1995).

Actors, in this case, as defined in chapter 2, are anyone who makes marketing decisions within the company. Resources are MkIS that the actors utilise when they perform activities. In this case, MkIS could also be classified into three categories: IS/IT tools, humans and their relationships, and physical facilities, similar to the discussion in the literature review chapter. The third layer, activities, includes marketing decisions that the actors have made. In this section, these layers will be described according to the case evidence.

### **7.2.1 Actors in Olympic**

The company has a relatively flat organisational structure with less than a hundred people working in the organisation including a managing director, the owners, marketing officers, sales representatives, corporate information resources officers and managers, and customer services representatives (CSR). Figure 7.2 illustrates the company organisational structure listed by positions. As can be seen, the director of Olympic is one of the owners of the group who takes care of the overall strategies of the company and makes decisions to implement information technologies currently existing in the organisation. The managing director is the one who actually plans, organises, manages and controls the marketing activities and cooperates with the director in implementing the systems and other marketing activities. Olympic is separated into four main departments according to responsibilities: marketing, sales, international business, and corporate information resources departments. The marketing department is responsible for creating marketing programmes including promotions, advertising, product development, and other marketing activities. The sales department generates sales, deals with customers, and establishes relationships with customers. These two departments also handle marketing and sales for both domestic and foreign customers. Moreover, salespersons may be assigned to deal with foreign customers, especially in the border areas. For example, a salesperson who works in the eastern area which is connected to Cambodia would be assigned to take care of the customers in Cambodia. The corporate information resources department handles finance and accounting functions as well as information system/information technology. This department, unlike others, reports directly to the director, not to the managing director.

Figure 7.2: Olympic's Organisational Structure



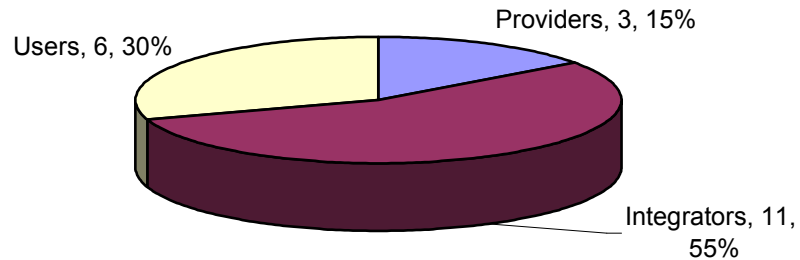


As mentioned previously, Olympic has approximately 100 employees working in various departments. The case evidence shows that approximately 80<sup>23</sup> people including salespersons and CSR have responsibilities related to marketing decision-making. They perform the focus activities of this study. Based on the methods discussed in chapter four, 20 people in total were interviewed in this case. The 20 people were chosen from various departments, responsibilities and availabilities. The interview lengths varied from one hour to just over three hours. All interviews have been recorded on Minidisks. Managers who are responsible for marketing decisions were interviewed. The other respondents were salespersons, marketing officers, marketing communication officers, and CSR. In this case, actors, especially the respondents, could be classified into three groups: providers, integrators, and users, similar to the discussion in chapters 1 and 2. Figure 7.3 additionally illustrates the classification. Three providers were interviewed in this case; they work in the information resources department, which deals with developing, implementing and maintaining the systems the company has not outsourced to other suppliers. They are responsible for the implementation of SAP and other applications as well as system maintenance. More than half of the actors in this case are the integrators who provided and utilised the resources to support their activities. These integrators include the director, product managers, salespersons and their supervisors as well as the CSR. Thirty percent use the resources to support their decision-making, and do not really provide any resources to the others. The users are marketing officers, marketing communication teams, managing directors, sales managers, and sales vice president. However, the case evidence also shows that sometimes the users acted as integrators, but this is relatively rare, i.e. less than 10 percent. The integrators sometimes act as users, yet most of the time they were both users and providers.

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<sup>23</sup> None of the respondents can give the exact number because it was not recorded and they are recruiting new employees to expand their organisation.

**Figure 7.3: Respondents' Characteristics by Types**



All the respondents are over 30 years old; the youngest one is 30 and the oldest one is 49 years old. The age range of the people who work in the company was between 30 to 50 years old. The ones who are between 30-40 years old mostly are the officers, product managers, and customer service representatives. The older ones, between 41-50 years old, are managing directors, general sales vice presidents, and the directors. As a result of the employees being largely of the same generation, the company has a nice and friendly working environment (Interviewees C2, C4, C5, & C6). Most of the respondents have been working in the company for more than 10 years, as stated before. The marketing officers are among the newer employees, a new product line, Shera, was introduced 10 years ago. On average, over 80 percent of the respondents have been working in the company for at least 10 years. Some of them have gained previous experience from working with competitors or other companies within the building materials industry. Most employees have graduated from recognised universities in Thailand, and only a few graduated from foreign universities, either the USA or Australia. At least a bachelor degree was obtained by almost everyone in fields according to their job responsibilities, except the salespersons who were mostly educated in non-related fields such as engineering, science, and social science. Those in the management levels had at least a master degree in business studies or related fields.

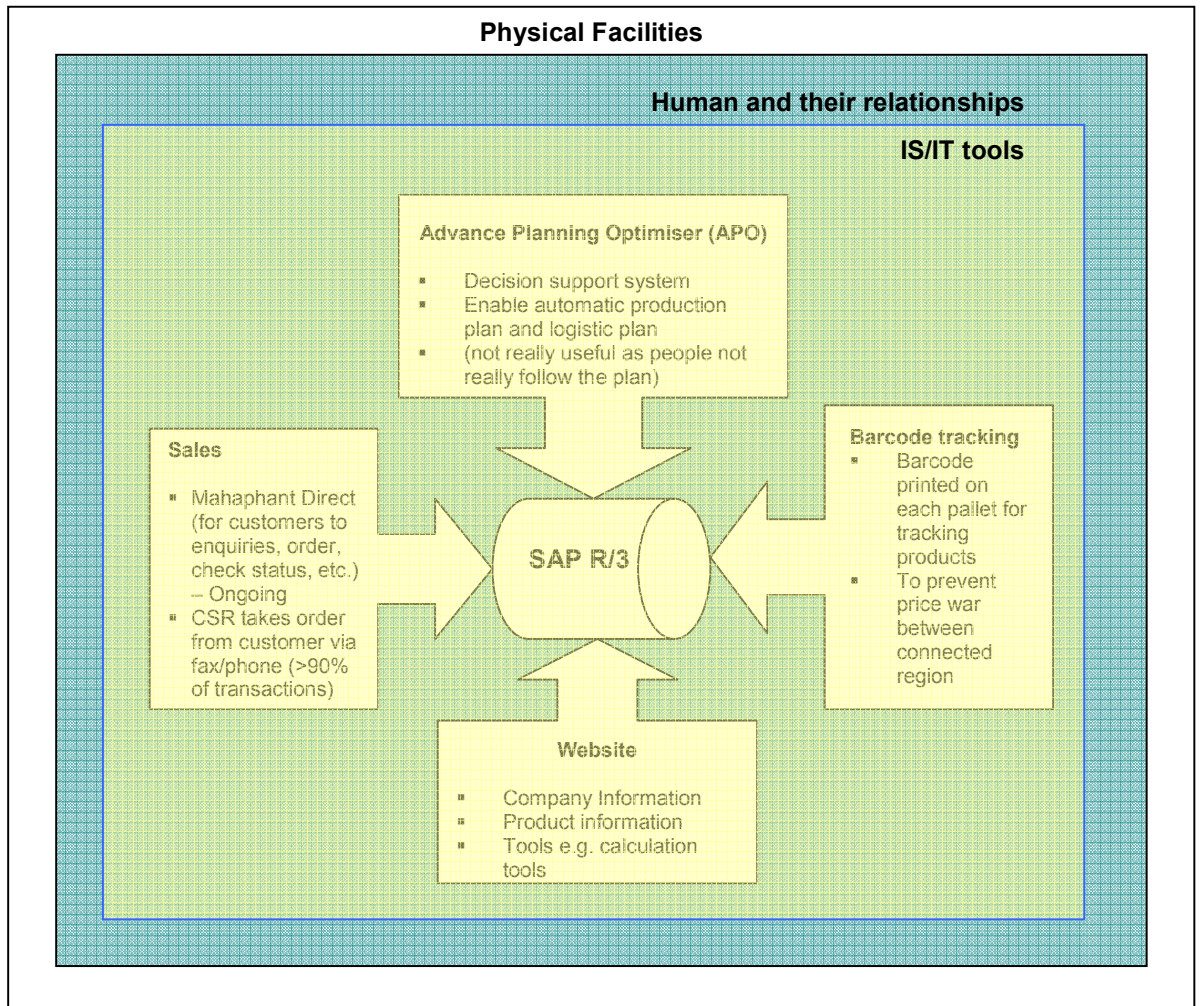
### **7.2.2 Existing resources in Olympic**

As defined in chapter 2, resources in the thesis are MkIS, including IS/IT tools, humans and their relationships, and physical facilities. This case evidence shows that the resources in Olympic could be classified as presented in figure 7.4. As can be seen, the IS/IT tools play a major role among the existing resources available within the company. Olympic was the first company in the Thai building materials market that implemented the SAP suite as a backbone in 1996 as of a great vision of the owner. The owner was educated in the USA, and she has a vision to employ information system(s) to support decision-making as well as re-business processes. Further, in 1996 to 1998, the company had installed a decision support system to optimise its whole supply chain initiatives and its operational effectiveness. It currently attempts to set up e-solutions to integrate with the key network partners, including both customers and suppliers. The IS/IT tools available within the company include the SAP, APO, Web sites, Barcode tracking systems, and sales applications, and each offers different support to the actors. The company has implemented SAP R/3 in 1996 to be an enterprise-wide resources planning system. SAP is currently employed as a backbone to link with all the other applications. The company has also started to implement a world-class sophisticated decision support system to optimally manage its entire supply chain initiatives and its operational effectiveness. This decision support system is called Advance Planning Optimiser (APO). It was an improvement over existing systems, but problems remain. The main problem that company encountered is lack of supply in certain products, especially accessories and Shera during the high seasons<sup>24</sup>. The company, however, has attempted to solve these problems by using the APO to forecast sales and manufacturing these products during the low seasons. Again, this was an improvement, but it wasn't a perfect solution.

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<sup>24</sup> As explained in the previous chapter, high season in building materials starts in November and ends around May the following year.

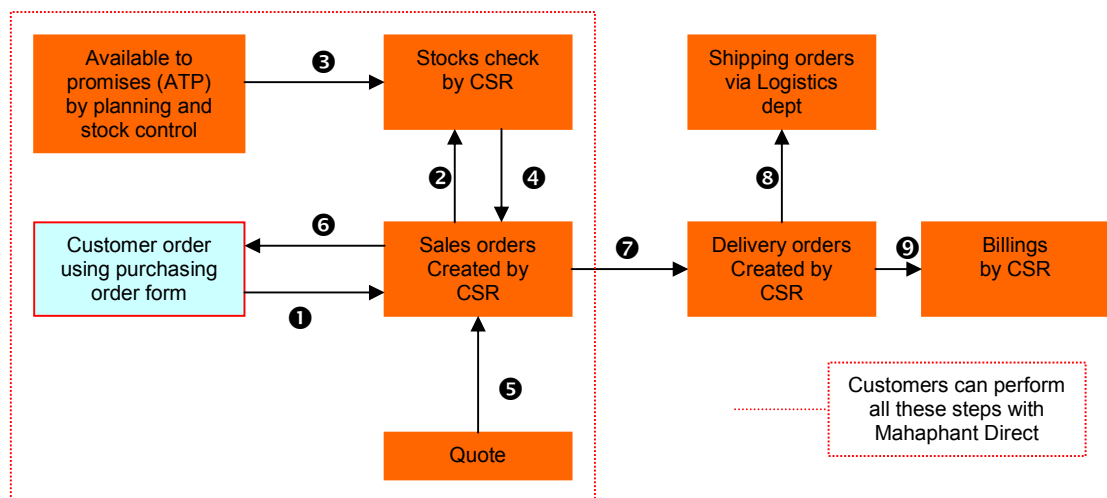
**Figure 7.4: Olympic's existing resources**



From 2000 to 2002, the company initiated a plan to create an e-solution to integrate key networks of business partners by employing SAP to create sales orders by CSR as the company found that most customers have no demand for creating their purchasing orders through the internet. Figure 7.4 presents general order lines of the company; this starts with the customers sending the purchasing order to the CSR via fax, the CSR then inputs the purchasing order into the system, checks the stock, and verifies the delivery date, time, and cost for each transaction. The CSR then contacts customers regarding the purchasing order to confirm the transaction, the customers will then obtain total amount due, and they can pay via bank transfer or leave it to be credited. The

CSR has to complete these steps and responses the customers within an hour after obtain the purchasing orders. It provides numerous benefits to the company as well as the customers; the company has a chance to gather all transactions details, satisfy the customer as well as share this information with the customers via salespersons and CSR. After the customers have confirmed their orders, which could be changed from their original ones, the CSR then issues the delivery orders, and then forwards it to the logistics department for shipping arrangement. In the final step, the CSR has to issue the billings attached to the delivery statements provided to the customers at the time they receive the products. Another significant reason that the company did not launch an automatic sales system is that it is too complicated for customers to create orders and arrange the varieties of orders to fit in delivery trucks, as this requires knowledge of how to optimise the space.

**Figure 7.5: Olympic Order lines**



Source: extracted from interviews

However, in the year 2006, a new web-based application called “Mahaphant Direct” will provide customers an alternative channel to the traditional one. Mahaphant direct would enable customers to create purchasing orders, sale orders, check the stock and verify delivery arrangements automatically online. In other words, it is enabling the customers to perform steps one through six by themselves, which could save both parties time and resources. It would also

allow customers to track their transaction history for a year and provide analyses of their orders.

Olympic has encountered problems similar to what Siam City Cement had; i.e., their products were sometime sold in wrong pricing areas leading to lower profit margins for the company as well as higher competition for the customers. Olympic has recently decided to implement a barcode tracking system for each lot of their products to ensure that they have been delivered and sold in the right area. Thus, the customers will obtain the same price as the other areas. This eliminates problems, and ensures fairness for every dealer and customer. Moreover, the company also utilises its web site, <http://www.mahaphant.com> as a portal to communicate and share general information with the customers and end-users. It provides some useful tools to both customers and end-users, for instance, a calculation tool that provides the total quantity and costs of products and accessories the users need to build their project. This tool provided over 90 percent accurate calculations. Apart from these systems, some employees like the management teams have created their own database using excel to keep all the data they extract from SAP.

The second type of resource is *humans and their relationships*. In Olympic, most employees have worked in the company over ten years before the economic crisis in 1997. The company has also recruited some new employees to work as junior marketing officers and product managers since they have expanded their product lines. The mixture between the new and the experienced people provide the company with great benefits of both new ideas and extensive experience. The management teams mostly have over twenty years of industry experience; some joined the company when it was established. These people are valuable resources for the company as they know and understand the market very well. These are internal human resources. However, the actors sometime exercised their relationships to obtain decision-support externally. Hence, any external people who might have control over the resources that the decision-makers required could be counted in this group. These external resources include people who work for government agencies, consultant companies, suppliers, and even competitors.

Although there is no governmental control over pricing of the company products as in the case of cement and sugar, information regarding housing construction across the country, demands for housing, economic situations, and other relevant information was gathered and published by some government agencies such as the Ministry of Industry, Ministry of Commerce, and the National Statistics Office. Some information was published on these organisations' Web sites; however, most updated information was not published. The decision-makers may then have to exercise their networks to obtain the information. Regarding the consultancy companies, Olympic normally dealt with AC Neilson and some other local companies to conduct larger scale research. Product managers and their teams generally perform small scale research by themselves to obtain information from customers. Advertising agencies are the other consultant group that the company employed when developing their marketing programme. The company has obtained encouraging results from almost every marketing programme, especially media and print advertising. Information from the suppliers and customers was mostly obtained on an ad-hoc basis by meeting with suppliers or customers. Product managers mentioned in the interviews that government agencies such as the Ministry of Industry normally arranged seminars, workshops, or meetings for building materials suppliers to share information. This information may not be accurate, but it helps when compared to existing information.

In terms of physical facilities the company provides to the employees, not all have allocated personal computers or laptops, but all of them have access to computers. However, some have complained that this is not sufficient, especially when salespersons need to write reports monthly reports to submit to their supervisors and managers. Every salesperson has actually been given a PDA in order to access the company datasheets. Yet, this does not really function well, since the salespersons normally used them as a phone to contact their CSR to ask them to access to the data and send it to customers' facsimiles when the salespersons were out visiting customers. In other departments, the situation is similar. The marketing department has only a few computers and laptops that were allocated to each manager. Moreover, the

physical facilities include any facilities provided by other stakeholders, perhaps the customers; for example, personal computers, facsimiles, or telephones that the customers may allow the decision-makers to use. In general, the external resources were utilised on an ad-hoc basis. Only one external source could be considered as routine - the regular monthly meeting between building materials suppliers.

### **7.2.3 Activities or marketing-decisions in Olympic**

According to the organisational structure shown above, each employee seems to have clear responsibilities and a clear understanding of the company's goals and objectives. However, the case evidence indicated that they did not have precise instructions to work with; they have very broad ideas about their responsibilities. Moreover, as the company encourages the marketing department to work with the factories to perform product innovations; these challenges were regularly encountered. They could be then classified as programmed decisions, because they knew how to deal with these decisions. They may utilise resources in two ways: transferring, or exercising their relationships to obtain data/information from other people, and transforming, or extracting data from SAP to Microsoft Excel and then manipulate, analyse, and interpret the data to gain valuable insights to support their decisions. The actors in Olympic have also encountered non-programmed decisions, or decisions that did not occur on a regular basis. This type of decisions occurred mostly on the management level, and included market expansions, advertisement, applications selection, etc. These decisions could also affect the subordinates as they may have to help gather data/information to support decisions. This means that the actors transfer knowledge from the subordinates which the subordinates may have transformed and transferred from some other source. After obtaining the knowledge, the actors may transform it using other means such as combining it with other data, verifying it in the database, and so on in order to generate decision-support. Nevertheless, each actor has dealt with both programmed and non-programmed decisions and they also perform both transferring and transforming activities when they interact with the existing resources to support their decision-making.



### **7.3 Decision-makers and resources utilisation of Olympic**

Now it is time to consider the interactions of the actors and the resources or how the decision-makers utilise the existing resources in association with their decision-making. As discussed in chapter 2, decision-making theories vary from coherent to chaotic (Miller *et al.* 1997). The coherent view is that the actors may make decisions in a relatively sequenced, linear, and reflective way in order to achieve step-by-step progress toward the company's objectives. In contrast, the chaotic view is that the decision-making process is not linear, sequenced, or rational. Thus, based on these two extremes, the ways the decision-makers utilise the resources would also range from coherence to chaotic depending on each actor's view of decision-making. As presented in the previous section, actors could be classified into three groups: providers, integrators, and users. Each group had its own combination of the two extremes; each individual also had his or her way of resource utilisation. However, the findings indicated that individuals in each group had a similar way to use the resources. As most respondents have worked in the company for over ten years, they actually had chances to get involved in systems development and implementation and they were trained to use the systems at least once since they joined the company. This section will discuss how each group utilises the resources to support their decision-making. The discussion will start with the providers, the integrators and finally the users.

#### **7.3.1 Resources utilisation by the providers**

Providers are the ones who develop, implement, and/or maintain the systems. The interviews illustrated that they believed that the existing systems are very useful and flexible ones. They were questioned about developing new applications or new features as well as the requirements gathering. They stated that the ideas or initiatives were normally generated by the director/owner who has a vision to implement useful systems. They then have to search for data or information to obtain the best development options, and then make a proposal to the director. Sometimes the director may decide to outsource or buy an application from a software company. After the proposal is approved, they have to either create and/or test the software to see if it works and is a benefit. The next step is to test the new application(s), re-

program it if necessary, then launch into the organisation. At the introductory stage, the providers would normally establish training sessions for each group of users. These steps appear linear, but in fact, it rarely occurs in any linear manner. The providers occasionally have to look for the required data from other resources, for example, data/information related to SAP, programming, and applications was not available in any internal sources. User feedback had to be obtained from external resources as no evaluation was conducted regarding any implementation. The providers have little idea of what the users expected until it was too late to make major changes. In addition, the providers knew that the integrators and users only extracted required data from the systems. The providers stated during the interviews that the integrators and the users might execute not to use the system:

*“Those reasons for not to use the systems executed by both integrators and users were only a sign that they do not want to adapt themselves towards the new things.” (Interviewees C1)*

In addition, communications between internal users and providers was lacking, apart from training provided in the very early day, the integrators and the users have a little chance to refresh their knowledge. The director, who made the decisions to develop and implement the systems, has very encouraging vision; she however may have to push harder to make everyone in the organisation utilise resources properly. A provider states in the interview that:

*“... Here, it likes if you fancy using the system you are welcome to use it, if you do not comfortable to use, it is fine, and you can do whatever you are happy to do to come up with the solutions. ... If she cannot force them to use, then who can. The situation will be like this until they see the benefits and make use of the systems.” (Interviewees C1)*

Another difficulty revealed during the interviews was that the providers have little chance to talk to customers directly to gather information about the customers' expectations when using the facilities, especially the Mahaphant direct. All customers' information including customer requests was gathered

from salespersons or CSR who dealt directly with customers. The providers seemed not too happy with the situation in which they obtained “second-hand” information. They preferred to talk to the customers directly to discuss in detail because they believe that the integrators and the users were not keen on technology; thus, some noteworthy data or issues were missing in the communication.

One reason for not automatically sharing information with customers is that the customers are not ready yet. The customers were mostly working under a traditional family business style. For example, they recognised their customers by memory and some even had no computer. The company, however, has attempted to integrate with relatively high value customers for several years by providing IS staff to assist the customers in developing information systems like networking, POS, accounting programmes, and other related business software to enable communication between the company and the customers. Most of the time, customers refused to share information because of privacy concerns, security, and the time it takes to develop computer skills. Moreover, they normally believed that they know such information by heart. These are the problems that the providers encountered when attempting to convince not only their colleagues but also the customers to utilise resources. A provider who had a chance to assist a customer develops a system mentioned that:

*“At first the customer did not want to invest time and money to develop the system, as they believed that they knew what they are doing. After a while, with high competition in the area, more importantly, their child had told them that it is a good idea to have such a system to use in their company. They therefore changed their mind and asked for help from the director.”*  
(Interviewees C1)

The evidence from the case thus indicated that the providers are likely to utilise resources in a way leaning toward anarchy end. Moreover, they seem happy working in these situations, but they also would like to obtain some direct feedback from both internal and external users, and they would like to be able

to conduct research or gather data to support their decisions rather than being fed information from others.

### **7.3.2 Resources utilisation by the integrators**

More than half of the respondents in this case are integrators due to the fact that most employees in the organisation could be classified as integrators. Although there is no “Analyst” position in Olympic, product managers, sales supervisors, salespersons, CSR managers, and CSR are responsible for analysing and interpreting data/information. For example, product managers were responsible for analysing market situations, developing marketing programmes, and marketing strategies. Sales supervisors and salespersons were responsible for their customer sale analysis and area market situations. CSR managers and their teams were responsible for their customer transactions analysis as well as handling complaints from customers. These examples lead to the conclusion that they are integrators as they both utilise and provide resources to the others mainly through reports and meetings. Another important integrator who could influence the others is the director/owner of the company, who leads the development and implementation of the systems and also utilises resources to support her decisions.

It is time to consider how these people utilise resources. Unsurprisingly, they mostly gather data from external resources on an ad-hoc basis and they only use sales figures and customers’ details from the database. One of them mentioned during the interview that:

*“... Market information was rarely stored in the system; it was only sales figures that are very useful and good enough to generate a good support. ... The other information mostly kept in quantitative data, which is really difficult to use. ... I sometime obtain customers information from the database, but only when I would like to have a general idea about overall customers not a specific one.” (Interviewee C10)*

For information that was stored in the database, they normally export the data to Excel and use Excel to assist their analysis instead of using the tools that SAP provided. Many examples of this were mentioned during the interviews, for example:

*"I do not know how to use the SAP properly." (Interviewee C7),*  
*"Excel is faster and easier to use." (Interviewee C10),*  
*"I cannot access to the server when I was on a trip to visit the customers." (Interviewee C11)*  
*"I was too old to learn, and it provides the same results anyway" (Interviewee C12)*

There are two main scenarios: either they understand how to use the systems or they do not. They always said that *"SAP is too difficult to use"*, or *"it is easier to use Excel"*. Another common complaint is they cannot access the systems, because the *"system is crashing"*, *"I have no PC/Laptop"*, or *"I have no access to the Internet when I visit customers"*. These reasons were usually reported by salespersons. However, if they could have access the systems or have been allocated a PC they still would not utilise the systems. It would be more comfortable for them to export data from SAP to Excel and then use the data to generate decision-support.

Moreover, when data is unavailable in the database, they tend to first go to their colleagues and then search other external sources like government Websites, customers, and competitors. A sales supervisor revealed that when he writes marketing situation reports he gathered information from salespersons. His subordinates who dealt directly with customers sometimes came up with totally different scenarios. He may then have to verify the data with what is in the database. If he has insufficient time, he will choose to believe the scenario given by salespersons he trusted. As a result, most integrators utilised SAP only as a place to store data and employed other tools to manipulate and analyse the data. The director even stated in the interview that:

*"I asked them, salespersons, to write a monthly report about their customers and sales. I had been submitted with different report styles, different information, different reasons from each of them, where it should be similarly reported. ... Sometime, I found reports from salesperson and CSR were totally different where they reported about the same customers." (Interviewee C16)*

This indicated that each of them selected information from diverse perspectives leading to different information written in the reports. In addition, it also shows that the decision-makers sometimes made decisions based on a different set of facts, which could be problems for the company. All this case evidence determined that the integrators, including the director, utilise the resources in an ad-hoc manner. They decide not to use the systems because they did not want to; they are happy with their own ways to combine and make sense of the resources even if they are not linear.

### **7.3.3 Resources utilisation by the users**

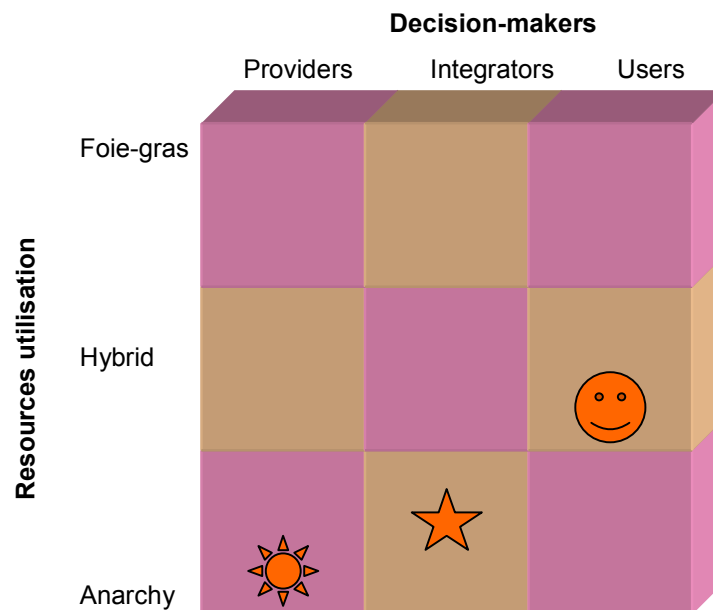
Unlike the first two groups, the users exercise their resources with a combination of the two extremes. This means they use a more foie-gras approach compared to the providers and the integrators. The users in this case are management teams, for example, managing directors, and general sales vice president, except for the ones who were previously classified as the integrators and the providers. This group also includes marketing officers and marketing communication officers. These users mainly used resources from various sources. They normally obtained written reports from their subordinates as well as had regular meetings with them, which indicates of a mixture of the foie-gras and anarchy. Considering the situations discussed earlier in this section, the integrators sometimes provided different information to the users. The users, therefore, have to decide which to believe or to have verified. This shows that the information sharing in the organisation was somewhat ineffective. The managing director mentioned that,

*"I knew that the information sharing within our organisation was relatively ineffective neither through reports nor meetings. I, however, did not want to force them to perform specific things because I knew that the system(s) does not provide everything they may require." (Interviewee C16)*

The users normally obtained information that was not stored in the database through their networks such as subordinates, colleagues, friends, and competitors. The evidence showed that the actors utilise the resources in a hybrid leaning toward the anarchy end. The users seemed to understand all the problems existing in the organisation regarding information sharing.

Figure 7.6 illustrates the ways decision-makers utilise the existing resources to support their decision-making. The orange sun refers to the providers who seem to employ the most anarchic resource utilisation among the three groups because the information they required was normally gathered on an ad-hoc basis. The integrators utilised resources in hybrid tend toward the anarchic way because they use some data fed by the systems as well as gathering some from other sources. Resource utilisation of the integrators is indicated by an orange star. The users are different; they normally requested information from others and they seem to be more organized than the others are. They, however, could not make decisions based on what they were given because it was somewhat inaccurate. Therefore, they had to search for more information from various sources. As a result, they utilise the resources by employing a combination of the two extremes with a leaning toward an anarchic method, indicated by an orange smiley face.

**Figure 7.6: Resources utilisation of the Olympic's decision-makers**



#### **7.4 B2B- related factors that influence the resources utilisation**

Discussions on how decision-makers utilise resources are presented in the previous section. Results from the interviews indicated that three groups of actors acted differently in utilising resources to support their decision-making. It is time to identify what factors affect the resource utilisation of these decision-makers. According to the research framework presented in chapter 3 (figure 3.2) and the literature reviews, four B2B-related factors were pre-determined to shape the ways decision-makers utilise the resources. The four B2B factors are number and value of customers, relationships with customers and suppliers, nature of demand, and dominant type of networks (Dwyer *et al.* 2001; Ford 2002).

Olympic's marketing strategies are similar those of Siam City Cement presented in the previous chapter. They emphasise establishing relationships with customers and building up brand awareness. Evidence showed that the company has segmented their customers based on the number of brands they purchase/sell in their shops. Four main segments are mono-brand with all the products company offers, Ha-Haung and Shera products mono-brand, Ha-Haung or Shera products mono-brand, and multi-brands. The first group is



named “Super Mono”, it is the most important for customers because they purchase all the products and they did not offer any other brands. The second group is called “Mono”, which has the largest numbers; they purchase Ha-Haung and Shera products solely from the company, but may or may not buy the other products. The third group may sell only a brand of Shera, Ha-Haung or both, but they also purchase from the other brands; this group is referred to as “Shera Mono or Ha-Haung Mono”. The last group with multi-brands is referred to as “Multi”; the customers purchase and sell various brands to end-users. The company has however attempted to encourage customers to become Mono or Super Mono by launching a loyalty program to collect points and obtain rewards, which is somewhat successful.

In addition, the number of customers in each group was different; the Mono is the biggest one, Super Mono is second and the least number is the Multi group. This implies that the company did not value their customers based on number of customers, but on the number of brands customers purchased. For example, although the Super Mono has fewer customers, it has more value to the company. The biggest group, the mono one, has relatively less value. Therefore, when making decisions, Super Mono has the highest priority. This evidence contradicted proposition 1 that said that number of customers determined the value.

Another example to illustrate this influence was given by a CSR as well as some other salespersons. During the high season, the company always encountered problems of excessive demand for certain products. The company then employed a quota system to allocate the products to customers. In general, within the quotas, the highest priority was given to the Super Mono ones who are assured that they would be allocated at least some of the products. The mono ones are guaranteed only the brand that they solely purchased from the company. The multi ones may not be allocated any of them. However, sometime the CSR could bend the rule if they knew that the customer was in a situation where the end-users needed more products to finish a job. In this case, either mono or multi customers would have been allocated the products prior to the Super Mono ones. The representatives

would have to search for information to ensure that the customers were really in such a situation. To ensure that the customers were in such troubles, the CSR needed to search for decision-support from sources like a salesperson, the customer, others.

However, the value of customers influenced the way the actors utilise resources. Users and integrators generally gathered transactional data such as purchasing order, amount purchases, and value of purchases from the systems. For information related to relatively high value customers, a salesperson could be asked. Thus, this case evidence illustrated that in making decisions regarding relatively less valued customers, the integrators and the users tend to employ relatively anarchy ways when utilising the resources because they wanted to favour the higher value customers. This contradicted the proposition 1 in which stated that actors would utilise the resources in a foie-gras manner when making decisions regarding relatively lower value customers. In contrast, the providers have stated that they would like to gather data only from the high value customers to support their decisions, which indicated that they would act even more anarchic when they make decisions regarding high value customers. One of the providers stated during the interview that:

*"I would like to discuss with some customers who are profitable for the company as well as could provide me with their expectations from sharing information with us. ... The customers could be anyone that the director seen as high value to the company. ... I had a chance to help a big customer develop their system(s), I have got an inspiration that I could use information I obtained to design the Mahaphant direct to fit with the customers' requests, which was really useful." (Interviewee C1)*

Based on this case evidence, it could be concluded that the value of customers influences the actors' resource utilisation in a different way due to various factors like experience, management styles, and types of decisions.

Supplier-customer relationships produced the greatest influence on how decision-makers utilise existing resources, especially relationships with the customers. As an example, the company attempted to establish relationships with customers by launching a loyalty programme to encourage the customers to become Super Mono or Mono ones. As proposed in proposition 2, relationships could be classified by long-term or close, and short-term or distant customers. The company generally established personal relationships with the former; in dealing with this group, the decision-makers tend to make decisions based on their knowledge, not looking into any other sources i.e. they utilise the resources in way that lean toward the anarchy end. This corresponds with proposition 2. It is subject to the types of decisions as well as the authority of the decision-makers. For example, if a customer has a healthy personal relationship with the person who allocates products, the CSR, it will be quicker for them to acquire products in short supply. If the customer has a relationship with higher authorities like the owner or the manager, the customer may be allocated the product even faster. Personal relationships with powerful managers generated greater influence on decision-making. For example, a respondent mentioned in the interview that:

*“... when a customer would like us to blend the quotas system, normally it was a management decisions either to give them or not, but if the customers know one of the owner personally, they could just ring the owner and make a request. Although they are not Super Mono customers, they could be treated better than the Super Mono, with such a relationship, no one would like to upset the owner.” (Interviewee C7)*

Not only relationships with the owners, but also relationships with the CSR influence the utilisation of resources. The representatives declared in the interviews that they sometimes do a favour for some customers who they know well. For example, they may allocate requested products without any further investigation. Customers they know well are mostly the customers who have been with the company for a long time. These two scenarios show that long-term and personal relationships could lead the decision-makers to utilise the resources in a way that leans toward the foie-gras end. That is to say, they

made decisions based on the given information but with a non-sequenced process. This shows that sometimes relationships influence the resource utilisation differently from proposition 2. It is an example of a good mixture of the two extremes.

According to the literature review, relationships could also be classified by types of integration between the company and customers and/or suppliers. The company integrated with their customers and suppliers employing mainly a value chain pattern. However, the integration has some limitations due to the fact that its main supplier, Siam City Cement, shares the same target groups of customers. Therefore, the supplier has a link with some of its customers. This could also influence interaction between actors and resources especially when the resources are customers who have dealt with both companies. However, it is somewhat difficult to draw conclusions about the trend of the influences because each actor acts differently with customers based on their personal relationships.

The third B2B-related factor that affects the ways decision-makers utilise the existing resources is the nature of demand. The demand for the company's products regarding colours, styles, sizes, and seasons were derived by end-users. These trends could be forecasted using the transactional data existing in the database. The data could also produce a guideline of the company's production plans regarding colours, styles, or sizes, in order to maintain stock levels. The decision-makers could also utilise the resources to adjust production plans generated by the APO regarding which plants should produce which products in which colours. For example, roman tiles in metallic green and blue were the best selling in the Eastern and the North-Eastern areas, so the plant in Lopburi province would be the most appropriate one. The company is currently encouraging the planners and the product managers to conduct marketing research on an ad-hoc basis to verify the data they have in the systems. Moreover, regarding the preferences of end-users, the decision-makers could utilise resources they obtained from the systems. However, when they attempted to develop a new product such as Trilon and Shera, most of the desired information is not stored in the systems. They may utilise other

product information as a guide, but they often had to conduct market research and product testing to gather all data about end-users' preferences on an ad-hoc basis. Nevertheless, for the latest product, Trilon, they hired a marketing research company to conduct product testing. They do not often gather data or information about end-users by themselves. They normally obtain the information through hiring a marketing research company or asking customers. For example, a product manager states in the interview regarding the Trilon development that:

*"We hired an agency to conduct marketing research to identify opportunities in the roof-tile market. Many opportunities were reported, but the gap in the demand for different roofing styles from middle to high income customers was selected. The ones who would like to have a better durability compared to the roman tiles, and with a relatively less cost compared to the concrete roof-tiles. As before, we offered roman tiles and Magma, the concrete ones. The roman tiles targeted middle to low income consumers, while the Magma targeted the high income. Information for product's design and development were gathered on an ad-hoc basis by the agency. My teams and I also went out to talk to the end-users, the engineers, and other related people in order to ensure feasibility of the styles, the colours as well as the sizes." (Interviewee C10)*

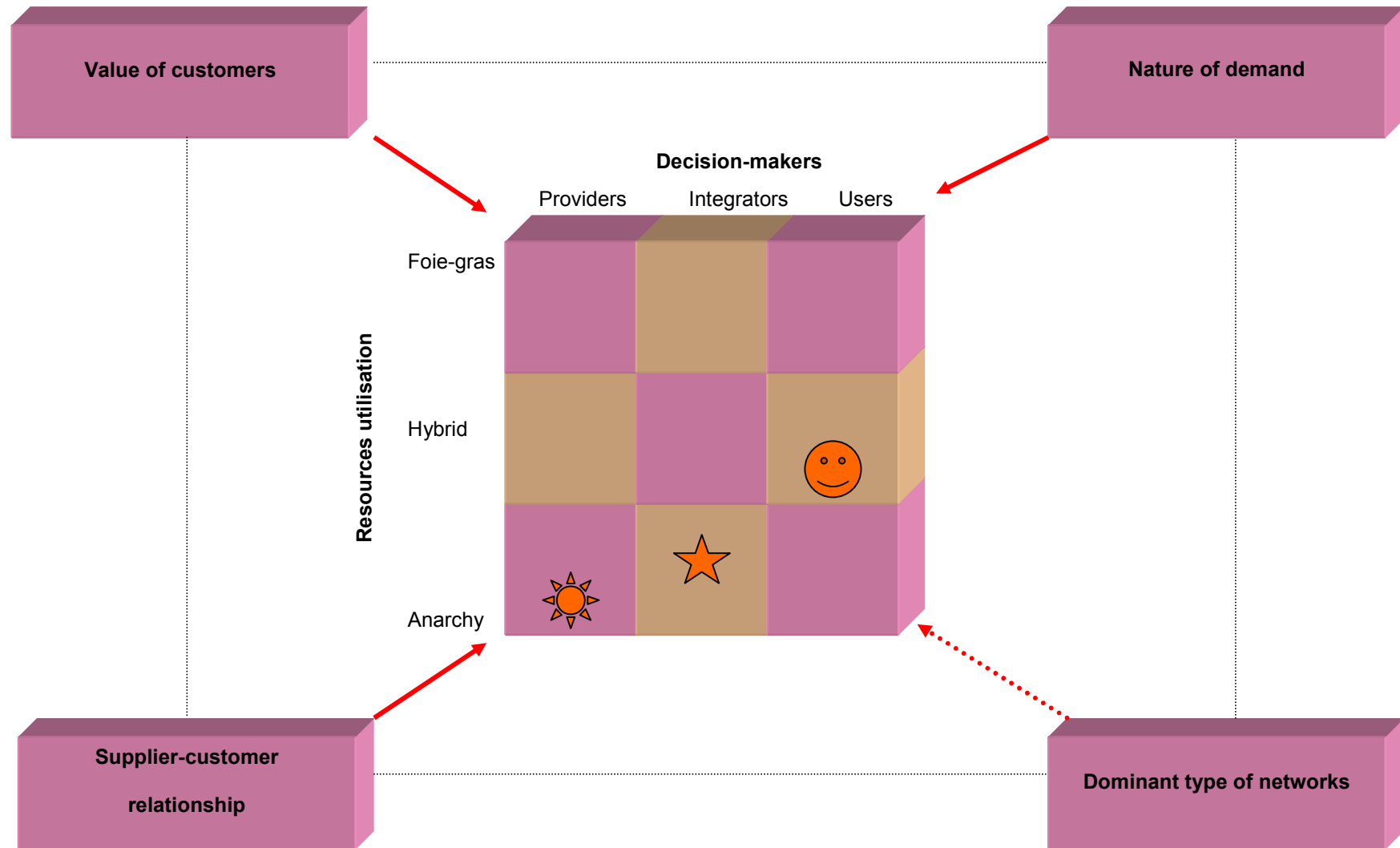
According to the example, the nature of demand influences to some degree the decision-makers' resource utilisation of the integrators in particular. The greater the demands from the end-users, the more non-systematic or non-sequenced the decision-makers act. This conclusion corresponds with proposition 3 discussed earlier.

The forth B2B-related factor is types of networks. Similar to Siam City Cement, the distribution network is the dominant one. The company's main supplier is Siam City Cement, which is also a main competitor. Due to the fact that the wholesalers are competing with the retailers in the same area, pricing is the most difficult decision. Different prices could cause the company to lose customers; the same price might give the same result. In this case, therefore, the decision-makers need to obtain very accurate information to support their

decisions. They usually gather information from salespersons who are currently dealing with the wholesalers, retailers and other nearby customers. Unless one of the parties is more important, the decision-makers may just refer to higher authorities or make decisions based on what they have on hand. The company normally offers the same price to customers in the same region, but customers will get more discounts as they purchase more (a step discount rate). Although a few respondents mentioned this factor, the dominant type of network influences how the respondents utilise their resources in correspondence with proposition 4 presented in chapter 3.

Based on the findings from this case, figure 7.7 shows that the B2B-related factors influence the resource utilisation of the decision-makers in Olympic. These factors, especially the value of customers and supplier-customers relationships, act interdependently of each other. Moreover, the case evidence also showed that there are other factors that influence the ways the actors utilise existing resources such as experience, management styles, types of decisions, and other factors that will be discussed in the next chapter.

Figure 7.7: Olympic's resulting framework



## **7.5 Conclusion**

Olympic was the first company in the Thai building materials groups that implement the SAP suite, however, the case evidence identified that it was not utilised in an effective manner. The systems did not cover all the required data/information to support decision-making, especially information related to marketing situations which involve mostly qualitative data. Most respondents were uncomfortable to exercise the system to generate decision-support, as they misunderstood the concepts and were “not sure” how to use the systems properly. Most respondents in Olympic, therefore, employed a relatively anarchic approach to resource utilisation. In addition, three B2B factors—value of customers, relationships with customers, and nature of the demand—influenced the ways decision-makers utilise resources. The dominant type of network could possibly shape resource utilisation, but with little evidence, it would be too risky to make a conclusion. The ways decision-makers utilise resources and B2B-related factors that influence them are illustrated by figure 7.7. There are some other significant factors that affect resource utilisation of the decision-makers in Olympic, which will be discussed later on in chapter 8.

Moreover, given that the company has worked in the similar environment with Siam City Cement, the two companies form a good comparative case to illustrate how actors utilise existing resources. However, evidence from this case could also be a good illustration of how factors influence the resource utilisation of the decision-makers. These comparisons will be further discussed in the next chapter.



# **CHAPTER 8**

## **DATA ANALYSIS**

### **8.0 Introduction**

This chapter is presented in order to compare and contrast the findings found from the three cases. According to the case evidence illustrated in chapters 5, 6 and 7, each organisation has its own characteristics that resulted in distinctive resource utilisation. Characteristics of each case study were summarised in tables 8.1, 8.2, and 8.3 by factors that influence resource utilisation in each case. These characteristics included B2B related factors and other factors discussed previously such as organisational structure, organisational technology, and government influences. Within an organisation, each group of actors utilise their existing resources in different ways, which lay between the continuums of the two extremes: foie-gras and anarchy. None of them, however, was found to employ either extreme. Three B2B-related factors—value of customers, supplier-customer relationships and nature of demand—have a great influence on the ways they utilise the resources. The evidence from these cases also suggested that other factors could produce vital effects on resource utilisation. The literature shows that these factors possibly influence the interactions of the actors and the resources.

This chapter starts with summaries of each case and further discussions on the other factors in order to recapitulate all the valuable results of each case. After that, a cross-case analysis is done to compare and contrast the results of each case. Since each case has its own characteristics that influence the ways decision-makers utilise resources, a cross-case analysis will identify the differences and similarities that will provide conclusions for the research questions and will meet the goals of this study. This section starts with the reasons for a cross-case analysis and a pre-defined method of analysis as suggested by Miles and Huberman (1994). The similarities and differences of the findings are illustrated in the following section. A resulting framework will be drawn from the results of these cases in order to provide graphical illustrations; the results will be compared with the

research framework in the next chapter. In the last section, a conclusion is drawn based on how decision-makers in these organisations make use of their existing resources in supporting their decision-making and the factors that shape the ways they utilise resources.

### 8.1 Summary and discussion of NY Sugar case study

Thai sugar market structure was relatively unique compared to the other industries because it could be considered as an oligopoly market with a government control over sale prices, cost prices, and quantities sold (quota) in the domestic market. It is also a competitive market with a control of the export quantities by the law and regulations. Ten years ago, before the respondent joins the company, it mainly sold products to a few agents for both domestic and export markets. As a result, the company obtained lower profits, but had less hassles dealing with government agencies and the other parties. Since the respondent joined the company, he has changed marketing strategies to expand target customers to industries, wholesalers, and retailers within a hundred kilometres from the factory.

**Table 8.1: Summary of NY Sugar Characteristics**

Characteristics	Descriptions
Management style	A family-run business moving from 2 <sup>nd</sup> generation to the 3 <sup>rd</sup> generation
Type of products	Sugar: necessary products for consumption
Organisational structure	Relatively organic
Organisational technology	Intermediate to basic level
Government influence	Enormous controlled by the government
Market Structure	Domestic: Oligopoly Export: Competitive market
Customers	Domestic market: Agents, Big industries, Wholesalers, Retailers Export market: international traders/ brokers, directly to other countries e.g. Brunei
Relationships with customers	Attempted to establish relationships with the retailers within 100 km from the factory. Long-term relationships were established with the international traders/brokers.
Power of customers	Determined by volume purchased and contribution to

	the company annual income. A few big customers, e.g. International traders/brokers, agents, and industries leads the higher negotiation power for the big volume customers.
Suppliers	Sugar cane farmers Packaging materials manufacturers
Relationships with suppliers	Very closed due to the nature of the industry and they integrated and shared information with the sugar cane farmers to obtain the best quality raw materials.
Power of suppliers	Suppliers, especially sugar cane farmers have little power to negotiate with the company as they were controlled by laws and regulations.
Nature of demand	Domestic: somewhat derived from end-users. Export: derived solely from the customers, depending on the world sugar market situation.
Dominant type of Network	Domestic: dominated by distribution network. Export: dominated by supply's network.

Table 8.1 illustrates the company's characteristics summarised from the case evidence. As can be seen, the company management style has been changing based on the influence of information technology, changing from a basic to an intermediate level. As discussed in chapter 5, the actor utilises the existing resources in a relatively anarchic way in dealing with any decisions. However, this changed when his role changed from user to integrator. The more control he has over the resources, the more foie-gras he taken. This could be due to his control of the resources; he believed then that the data is somewhat accurate and sufficient. In contrast, when he had no control, his uncertainties would create doubts and he then has to verify the data before utilising it.

According to the evidence, three B2B factors produce striking effects on the resource utilisation. The three factors are number and value of customers, supplier-customer relationships, and nature of demand. The number and value of customers affects the way a customer is valued. Supplier-customer relationships, especially relationships with customers, produce a great effect on the way the decision-makers utilise the resources. The

longer or the closer relationships the customers have with the company, the decision-maker, and/or the owners, the more foie-gras they take. During the interview, the respondent referred to his personal relationships with customers many times to emphasise how important it is to operate the business. It can also be concluded that relationships with customers is the most valuable B2B-related factor that shapes the way decision-makers utilise resources. The nature the domestic demand for sugar was sometime derived from end-users, sometimes not, depending on whether the purpose of the purchase was to use as raw material or to resell. For the former group, the demand was mainly derived from the customers. The latter's demand was derived from both customers and end-users. The decision-maker therefore performed differently in utilising the resources by exercising relatively more ad-hoc and non sequenced resource utilisation when dealing with the demand derived from both customers and end-users. In fact, the more information related to end-users required, the more anarchy is employed.

Apart from the above three B2B-related factors, the evidence also suggested other factors that could impact the way the decision-maker utilises resources. Most of these factors were defined and discussed in literature review and were classified into four groups based on a general model for understanding organisational buying behaviour (Webster *et al.* 1972) and major influences on industrial buying behaviour (Kotler 2001: 221-227). The four groups include personal and interpersonal, organisational, marketing, and other related factors as defined in chapter 2. Each group is comprised of various factors, which the case evidence demonstrated influenced the resource utilisation of the decision-makers. These factors are experience, organisational structure, management style, government policy, nature of decisions, and level of organisational technology.

In this case, the respondent has over 18 years experience working in the sugar industry in marketing departments starting from the operation to strategic level. He has worked nine years for NY Sugar and the previous nine years in a competitor company, Mitr Phol. The actor has extensive experience in the industry. He makes decisions and/or performs activities mostly based on his experience, unlike someone with less experience.

Experience influences the resource utilisation of the decision-makers as described by Kotler (2001: 221). The evidence also showed that experience has influenced the actors to act more non-sequenced when they have more experience. As presented in chapter 5, NY Sugar's organisation structure is relatively organic, i.e., flat and flexible based on the classification of Burn and Stalker (1961). This allows the decision-maker to search for decision-support, resulting in freedom for the decision-maker to act more chaotically in generating decision-support. This result corresponds with the discussion in the literature (Hulbert *et al.* 1972: 36).

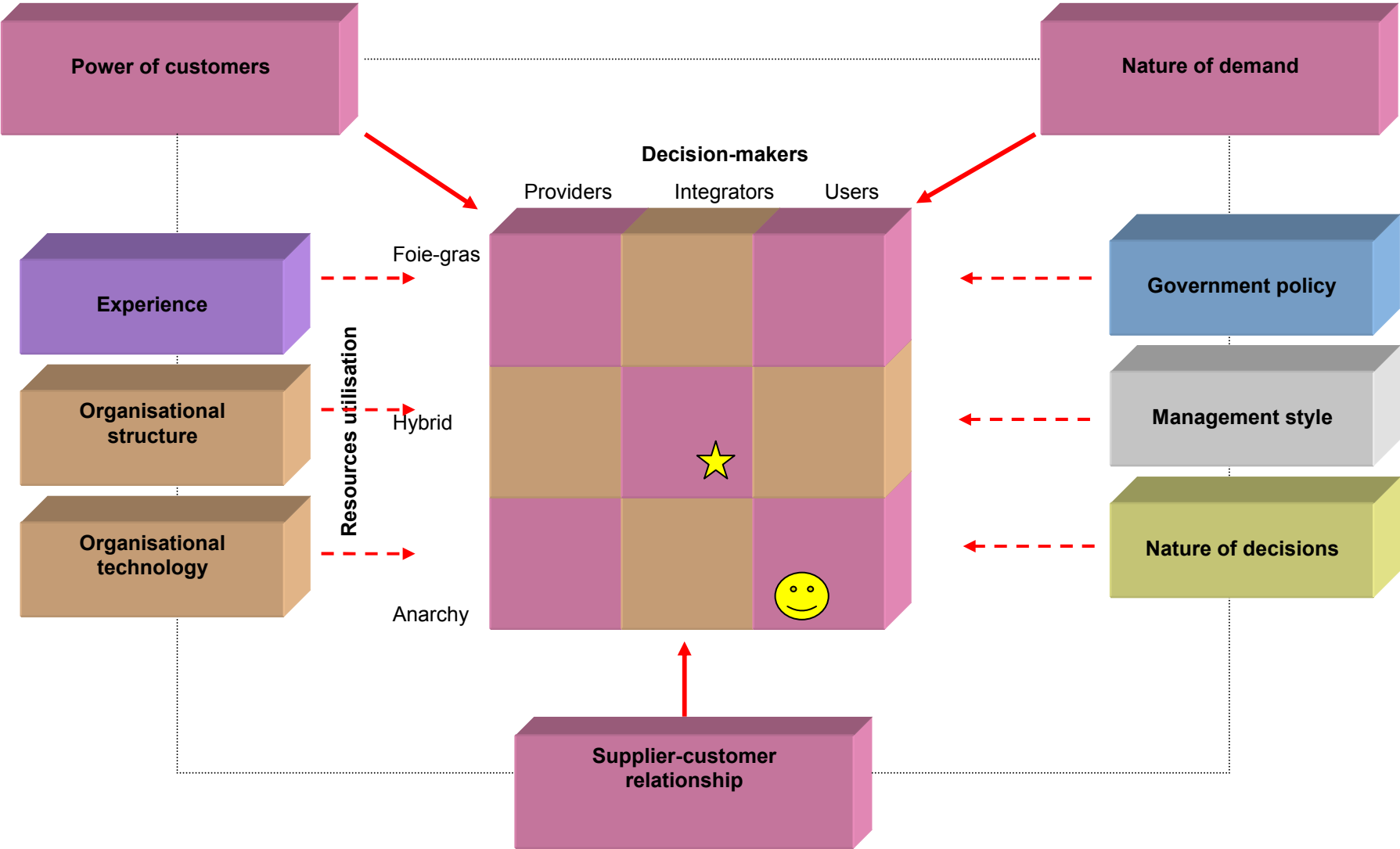
As the sugar industry is controlled by the government, especially price and quantity sold, government policy has an impact on decision makers' resource utilisation. The more the government's policy is likely to change, the more chaotically the decision-maker will use resources. This is because the decision-maker needs to know and prepare for the new policy. Therefore, he needs to gather decision-support related to the new policy from various government bodies such as the Ministry of Industry, the Customs Department, and the Ministry of Commerce. In order to obtain this information on time, i.e., before it has been issued, the decision-maker has to talk to many government officers who may have the information. When any policy is changed and published, it may be too late and could become a problem.

The nature or types of decisions could be determined as routine or not, or programmed and non-programmed as discussed in the literature (Miller *et al.* 1997; Simon 1960). This is another factor shape the way decision-makers utilise resources. When dealing with routine decisions, the manager tended to exercise a hybrid to anarchic approach depending on the facts available, whether it is sufficient or not. The decision-maker tends to make use of resources available in his database first and then may gather some missing information from others. On the other hand, when making decisions regarding a non-programmed decision, the decision-maker tends to employ a relatively more anarchic method of resource utilisation like talking to both internal and external people in order to gather the required facts.

Level of organisational technology or the *types of available resources* internally is another factor that influences the resource utilisation of the decision-maker. The overall level of technology in NY Sugar would be categorised as an intermediate level according to the classification presented in chapter 2 (Parkinson 1994: 363). The decision-maker and the other officers have access to at least a personal computer or a laptop; the company also installed the NIRVANA software to store transactional data such as sale orders, purchasing orders, basic accounting information, financial information, and basic customer data. NY Sugar, however, did not provide any centralised database or comprehensive application to the actor. This resulted in fragmented databases. Although the respondent has not stated this explicitly, the fragmented databases and insufficient decision-support implied that he has to search for data/information in his own way, which led to an anarchic way of utilising resources.

Based the above evidence, figure 8.1 illustrates how the actors utilise resources to support activities and shows how various factors influence resource utilisation. Based on this case evidence as discussed in chapter 5, it can be concluded that the integrators usually utilised the resources in a hybrid toward the anarchy end, while the users exercised their resources in a relatively anarchy way. Three B2B-related factors were found to have a great influence on resource utilisation, as presented in the figure 8.1 using solid red arrows. While the other six factors: experience, organisational technology, organisational structure, government policy, management style, and nature of decisions produced noteworthy effects on the way the actors utilised the resources. Most of these factors were discussed in the literature as possibly influencing resource utilisation.

Figure 8.1: NY Sugar’s resulting framework



## **8.2 Summary and discussion of Siam City Cement case study**

In this case, actors could be classified into three groups: providers, integrators and users. Each group has acted differently as discussed in chapter 7. The providers are more likely to utilise the resources in a way that lean toward the foie-gras end. They have made decisions according to the company's rules and regulations that are very systematic. Only sometimes, they might have to search for other sources when they were not given enough information. The integrators, in general, utilise resources in a relatively anarchic way. They may use some information they trusted and obtained from the systems, but they will verify the data that they think may be unreliable. This is not done step-by-step, but in relatively chaotic. Users are classified into two groups, and each group has acted differently. The first users groups includes the management team, they utilised resources in a way that lean on the foie-gras end as they could digest the information from the systems as well as data given by others. The marketing communication officers or the second users group, were more likely to employ relative anarchic ways, not with their intentions, but because they have insufficient information provided by the systems.

Table 8.2 presents a summary of Siam City Cement characteristics obtained from the case evidence. As can be seen, each group of decision-makers had their own views about who the customers are depending on whom they attempted to satisfy. These customers have different value and power for each decision-maker. The relatively higher value customers are the ones who have more power to influence the ways decision-makers utilise their resources. An obvious bit of evidence for this point is the EVP who influences her subordinates to utilise the systems by encouraging and/or forcing them to make decisions using decision-support generated from the systems. There were, however, some circumstances that indicated that the decision-makers utilise resources using more anarchy when dealing with higher value customers. These situations lead to a conclusion that the value and power of customers affects the resource utilisation of the decision-makers regardless of who their customers are.



**Table 8.2: Summary of Siam City Cement Characteristics**

<b>Characteristics</b>	<b>Descriptions</b>
Management style	Western style as a subsidiary of Holcim group
Type of products	Cement: necessary products for developing countries including Thailand
Organisational structure	Relatively mechanic in terms of clear and precise job description but relatively flat organisation
Organisational technology	Advanced level
Government influence	On Price
Market Structure	Domestic: Oligopoly Export: Competitive market via Holcim network
Customers	Domestic market: Agents/sub-agents and Business users Export market: Direct export or export via brokers/network
Relationships with customers	CRM is the main corporate strategy
Power of customers	Different groups of decision-makers have different viewed toward their customers. Providers' customers: internal employees esp. EVP, and their bosses Integrators' customers: internal employees, customers, and end-users Users' customers: customers, and end-users
Suppliers	Energy supplies, packing materials companies, marketing materials manufacturers.
Relationships with suppliers	Integrated with some major suppliers e.g. packing materials manufacturers using e-sales to basically perform stock replenishments.
Power of suppliers	Relatively insignificant to the decision-making
Nature of demand	Domestic: somewhat derived from end-users. Export: derived solely from the customers, depending on the world market situation.
Dominant type of Network	Domestic: dominated by distribution network. Export: dominated by supply's network.

The company currently focuses on establishing relationships with customers. Initially, the relationships have been established with high value customers measured by purchasing volume as well as period of time

working together. Long-term customers could be worth more than the high purchasing volume customers who easily switched to its competitors. When dealing with these customers, the decision-makers acted carefully to reach a win-win situation for both parties. For urgent decisions, the decision-makers may utilise the resources they were given to reach best possible solutions, which is ways that leans on the foie-gras. In contrast, the decision-makers may exercise other resources to verify the data and reach the best solutions, not just optimal ones if they have sufficient time. Here the priority of decisions was involved. The priority of decisions has been discussed once in the literature and was defined based on importance and urgency according to Piercy and Evans (1999: 268-9). The above example showed that the higher priorities decisions are made using the foie-gras means. This could be because they have limited time to search for further supports, so they worked happily with the data/information given to them.

Cement is a somewhat standardised product, and can be seen as a necessary product in developing countries like Thailand (Krung Thai Research Centre 2005). Demand for cement, however, depends on the end-users as well as the customers. As discussed before, cement is a seasonal product due to the fact that the Thai people tend to build or renovate their houses during the period of December to April, and mostly finish before the Thai New Year Day<sup>25</sup> to prepare for the family members who will come back during the New Year. During this period, cement consumption almost doubles compared to the other months. However, demand from industries and contractors are relatively stable all year. This information is commonly known by anyone with experience working in any building materials industry. As the demand was partly derived from the end-users, in order to expand the market, launch a new product, or perform marketing activities, the decision-makers need to gather data/information about the end-users preferences as well as the preferences of the customers. As a result, the integrators and the users exercise a more ad-hoc method to generate decision-support related to end-users. On the other hand, the nature of demand was found to have relatively no impact on the providers' decision-making.

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<sup>25</sup> Thai New Year day is 13th April, which is called "Song Karn Day". It is a tradition that all family members will pay a visit to their homes.

As a result of the economic crisis in 1997, Siam City Cement had become a subsidiary of the Holcim Group. The management style dramatically changed from being a family-run business to a more Westernised style (Interviewees B4, B18, B20 and B17). During the transitional period of 1998 to 2000, the company laid off many employees by offering an early retirement programme and recruited new employees, mostly recent graduates. These new employees were selected mainly based on their English fluency as well as their education. As a result, the company recruited relatively no experienced employees and they had to train the new ones to fit in the new organisational culture. The EVP stated that the company recruitment policy is to look for those who intend to learn and grow together with the company. In contrast, the management team had slightly more experience of over ten years working in the company and some years in other related industries. The difference in years of experience led to distinctive ways of resource utilisation. For example, the employees who have more experience are more likely to employ more anarchy in the combinations. The management teams acted differently; they were more likely to employ a more foie-gras method of resource utilisation, even though they have more experience. Although the influences of experience did not correspond to all the decision-makers, it clearly shapes the ways decision-makers utilise resources and every respondent pointed it out many times during the interviews.

As a part of the Holcim group, the company was forced to adopt similar information systems with the mother company. Siam City Cement has implemented several advanced information technologies including SAP, WebSales, TPM and other systems presented in figure 6.11. The employees are forced to utilise these systems to support their decisions. Some of them, however, tricked the systems by inputting inaccurate data resulting in inaccurate information sharing across the organisation. This created internal conflicts especially between salespersons and analysts, resulting in shifting the way they utilise resources. The analysts would use various sources to verify the data gathered by salespersons when the decision-makers have no faith in the data. This shows that they utilise resources in a way that lean toward the anarchy end.

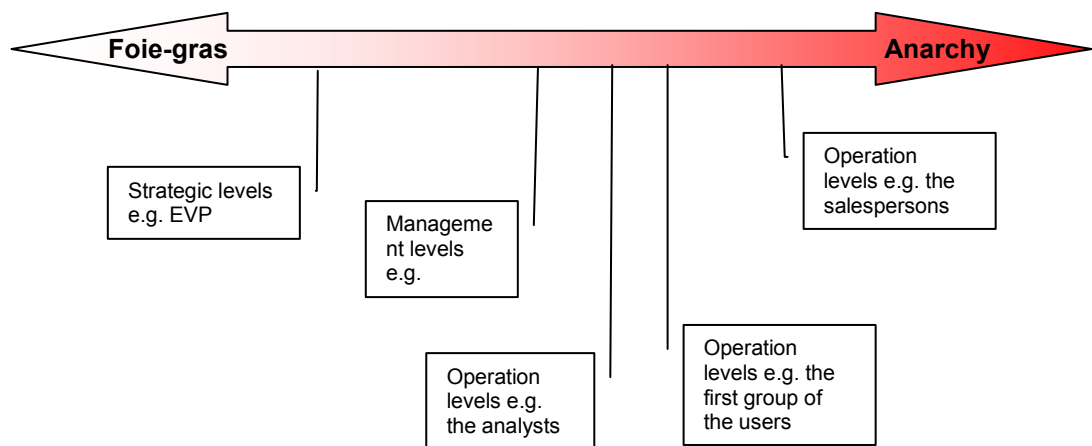
Every respondent stated at least three times during the interviews that they made decisions based on their experiences and the information obtained. The evidence illustrated that those with more experience are likely to employ a more anarchic method. The more experienced salespersons, especially, made decisions based on their knowledge rather than using information provided by the systems. The ones with less experience base their decisions on data provided in the systems and then build up their experience thus shifting to a more anarchic method.

Almost all the respondents in Siam City Cement, perceived that they were provided with advanced technologies compared to their competitors or others who working in a similar industry. Approximately 80 percent of the respondents relied on the systems and will only search elsewhere if the needed information was not in the systems or proved inaccurate. Only salespersons admitted that they input inaccurate data into the systems. In addition, conflicts occurred between the salespersons and the analysts, which imply that the relationships between people in the organisation significantly influenced the ways the decision-makers utilise resources. Trust among people in the organisation is also important, and the evidence from managers' interviews showed that they trust their subordinates to provide them with information to support their decisions.

Types of decisions influence the way the respondents utilise the resources. Considering a challenging or non-programmed decision, the decision-makers tend to carefully search for information from various sources to support the decision. In contrast, for a routine decision, if the systems could provide sufficient support, the decision-makers tend to make decisions based on what they were fed. However, if it was insufficient, they then start to fulfil their requirements by looking at other sources. Generally, there are three levels of decisions: strategic, management, and operation. In Siam City Cement, the decision-makers tend to act differently when dealing with the different levels. Strategic decisions are normally made by the EVP and the managers of market development, marketing activities, and national sales departments. They are more likely to be happy with given reports and make decisions based on the reports and their experiences, which is a way that lean toward the foie-gras end of utilising resources. Decisions related to management levels are generally decided

by managers in the sub-departments. They typically work in a similar manner to their bosses, but because they often are faced with lack of information or inaccurate data, they are more likely to employ both of the foie-gras and anarchy approach. The operational level contains three different groups: the analysts, the salespersons, and the first users group. In utilising the resources, they act relatively more anarchic when compared to the other levels, which can be lined up as the analysts, the first users group, and the salespersons. Figure 8.2 illustrates the ways each group utilise the resources.

**Figure 8.2: Resources utilisation by levels of decisions**



Another factor encouraged the respondents to utilise resources in relatively foie-gras is management style. The management style of the company could be seen as a Westernised style. This style is relatively mechanic; that is to say, the respondents were informed of clear job descriptions, policies, company's missions, visions, goals, and objectives. A relatively mechanic organisation influences the actors to utilise resources in a way that relatively more foie-gras.

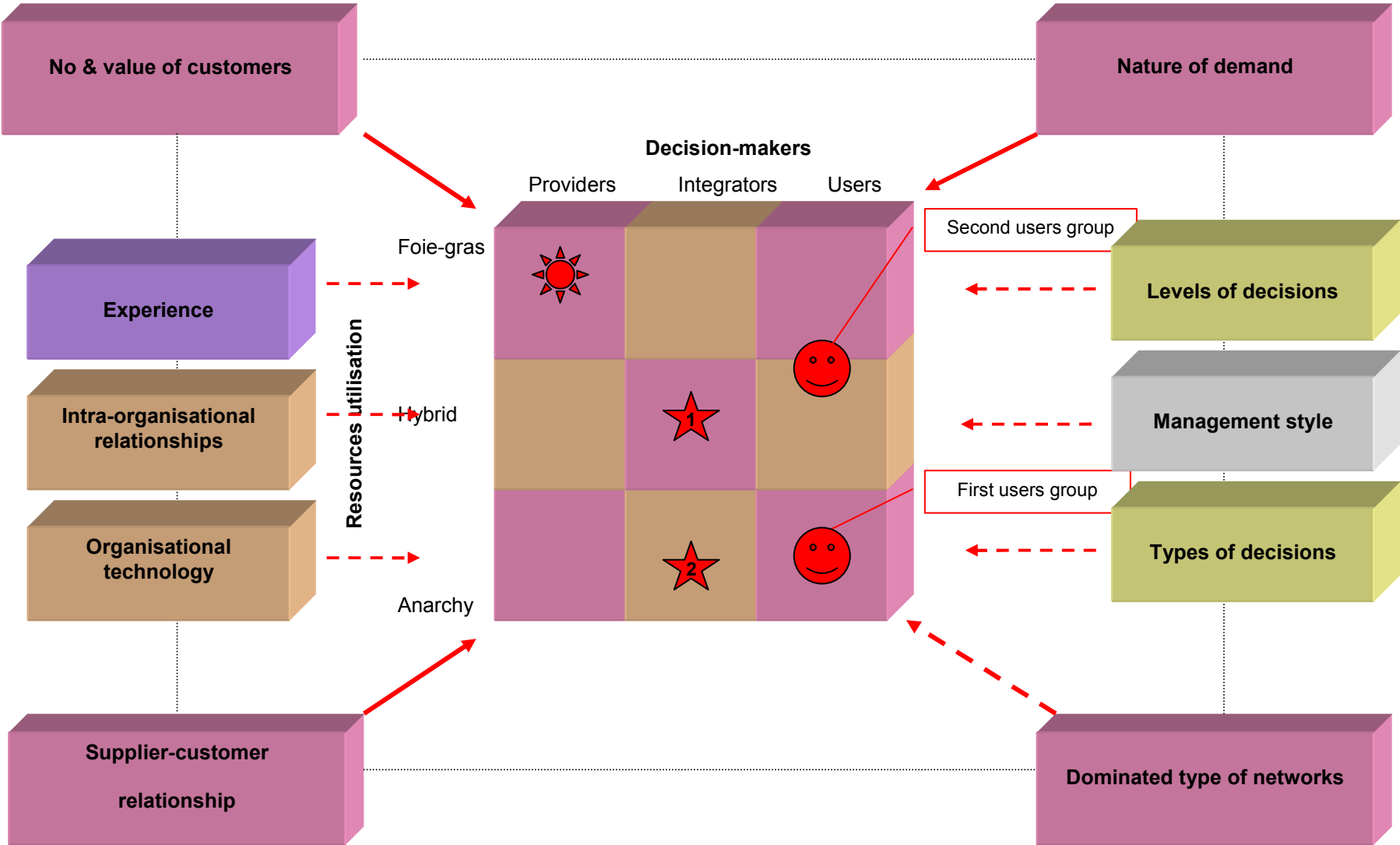
This evidence implied that there are other factors apart from the B2B ones that affect the ways the decision-makers utilise resources, which are:

- Experience of the decision-makers
- Level of organisational technology
- Intra-organisational relationship
- Types of decisions
- Levels of decisions

- Management styles
- Priority of decisions

Most of these factors were defined and discussed in the literature to potentially influence resource utilisation. However, management style was not. These factors influence each group of actors differently, which makes it difficult to conclude how each factor shapes resource utilisation. Figure 8.3 illustrates resource utilisation of the decision-makers in Siam City Cement, and the factors found to influence it. Similar to the NY Sugar, solid red arrows are used to link factors that have striking effects on resource utilisation. The red dash arrows showed the other factors that influence resource utilisation. The grey line links every factor, meaning that these factors were somewhat interdependent so that a change in one of them may result in different effects on the other factors.

Figure 8.3: The Siam City Cement's resulting framework



### 8.3 Summary and Discussion of Olympic Case Study

Olympic was the first company in the building materials group that completely implemented the whole suite of SAP R/3 and used enterprise resources planning. In addition, the company also installed a decision support system called APO to optimise its production plan. The company established these advanced technologies because one of the owners was educated in the USA and foresaw the benefits the company could obtain from employing these technologies. Table 8.3 presents a summary of the company's main characteristics found to produce effects on resource utilisation.

**Table 8.3: Summary of Olympic Characteristics**

Characteristics	Descriptions
Management style	A family-run business with Western influences
Type of products	Roof-tiles: Ha-Haung Artificial woods: Shera
Organisational structure	Relatively organic in terms of flat and flexible working in a network environment
Organisational technology	Advanced level
Government influence	No
Market Structure	Competitive market
Customers	Domestic market: Agents/sub-agents and Business users Export market: Direct export
Relationships with customers	Long-term relationship with customers have been established through loyalty program
Power of customers	Value of customers defined by numbers of brands the customers purchased within the same product ranges.
Suppliers	Energy supplies, marketing materials manufacturers, raw materials e.g. cement producers
Relationships with suppliers	A distant with suppliers was keeping as they are both suppliers and competitors. Some system e.g. WebSales were employed without integrating it to the company's system.
Power of suppliers	Relatively insignificant to the decision-making
Nature of demand	Domestic: derived from end-users as well as the



	customers Export: derived from end-users as well as customers, depending on the world market situation.
Dominant type of Network	Domestic: dominated by distribution network. Export: dominated by supply's network.

Although the company has adopted advanced technologies, the management style remained a family-run business, with the second generation operating the business. To be more precise, the management style could be called a modern family-run business that adopted the strengths of both a traditional family-run business and the Western style. As a result, the company was managed in a relatively more organised fashion in terms of organisational structure, more precise in job descriptions, and with a more relaxed working environment. Although the company has adopted various advanced technologies, they existed as an option for decision-makers and it was not forced on them. The decision-makers could exercise any sources of information they preferred to generate the decision-support they required. Approximately 90 percent of the respondents stated that they are comfortable working under this management style, with superior advanced technologies around to support. Consequently, the decision-makers utilise the resources in a more anarchic way, which sometimes resulted in different sets of facts. It therefore, led to difficulties making use of the information and reaching the solutions. This management style and associated organisational structure is relatively organic with a flat and flexible structure (Buttery *et al.* 1991: 28), and the employees worked as a network, helping and trusting each other resulting in few conflicts. Subsequently, the decision-makers' resource utilisation was likely to be more anarchic. These consequences showed that organisational structure is an important influence on resource utilisation, which corresponds with the literature (e.g. Bennett *et al.* 2001; Piercy 1979: 267-8; Svensson 2004).

The actors were classified into three groups: providers, integrators, and users. Evidence from the study indicated that the providers and the integrators performed similarly in utilising the resources. One reason was insufficient

data/information in the systems. In addition, the integrators had another reason, which is being uncomfortable using the systems; in other words, they did not have the skill to use the systems to obtain decision-support. Consequently, they only utilised the system as a place to store data. The respondents, however, had much more experience in the company and this contributed to a more anarchic method of resource utilisation.

This case evidence also illustrates that three B2B factors influence resource utilisation. The three factors are value of customers, customer relationships, and nature of demand, as discussed in the previous chapter. The value of customers was not classified based on number of customers or purchasing volume, but was categorised on the basis of number of brands the customers sold. Priority was given to the Super Mono customers and then Mono customers. Relationships with customers had an enormous influence on how decision-makers utilise resources, even greater than the value of customers. Long-term relationships or personal relationships with customers could influence decision-makers to utilise resources in a hybrid of the two extremes as they will make decisions based on what they have on hand, if it was inadequate, they then may use other sources. The third factor is the nature of demand, which is derived from both customers and end-users for all products they offered. The decision-makers, especially the users and the integrators, use the resources using relatively more anarchy when gathering decision-support regarding the end-users. In contrast, the nature of demand was found to be irrelevant to the way the provider utilises the resources. Dominant types of networks somewhat influenced a few decision-makers resource utilisation. There was insufficient evidence to form a conclusion.

Every respondent discussed the experience and skills of the decision-makers. Most respondents have at least ten years experience working in the company prior to the systems' installation. Therefore, they believe in themselves rather than the systems. In other words, if they believed that they have adequate information to support the decisions without obtaining data from anywhere else, they preferred to make decisions based on what they know rather than what the data or information told them. The experience of the decision-makers

influences the way they utilise resources such that the more experience they have, the more anarchy they employed.

*“... As I said, several reports sometimes provided very different information, I had to choose which one to believe, which one was wrong, ... based on my experience of working with these people both salespersons and customers. I then made decisions using my experience digest the information obtained. ... Sometime I called the customers to verify the situations as well as talked to the salespersons.” (Interviewee C15)*

The lack of computer skills was cited as an excuse to not use the systems by many respondents.

*“I do not know how to use SAP, but I know the Excel.” (Interviewee C12)*

This is a noteworthy factor influencing how decision-makers utilise the resources; they might employ the systems more effectively if they are trained properly on how to use the systems as well as what the systems were implemented.

All the respondents perceived that the company has provided advanced technologies. Perhaps it was too advanced; they often found it difficult to adapt the systems. Alternatively, perhaps, they did not want to learn new skills because they did not see any greater benefits from using the systems compared to what they usually did. The systems were often used only as an electronic storage area, instead of filing cabinets. The company seemed to have no need to provide them with any advanced technology, since a large database would be enough to support their decisions. Advanced technology needs to come together with a collaboration of the integrators and the users; it is not worth investing a huge amount of money into something that no one would use. However, in this case, the better the technology the more anarchic was the utilisation of resources. For the providers and the users the level of technology was irrelevant.

The relationships among people who work for Olympic were relatively healthy as no conflict between departments was mentioned in the interviews. The respondents seemed to trust others to provide required information. If they found inaccurate information, they would inform the one who gave it to them and update it with better information. The relationships within the organisation influenced the way decision-makers utilise the resources, as they relied on other people, so they were likely to utilise the resources in a relatively more foie-gras way.

Market environment, especially competition, could influence the decision-makers to utilise resources in a different way. For example, to take a customer from competitors, or encourage a customer to be a mono brand or a Super Mono, the decision-makers need to know information regarding their competitors. The salespersons normally gathered information either directly from the customers or by observation while visiting the customers. They also could gather information regarding competitors' prices and products from multi-brand customers. The salespersons could obtain this from visiting customers each month. However, this information was written in the monthly reports that the salespersons have to produce, but is never stored and shared in the systems. If the other departments would like to obtain this information, they then have to ask salespersons or search from file cabinets. For any decisions that need market information, the decision-makers had to search for it. Therefore, the more market information they need, the more anarchically they act.

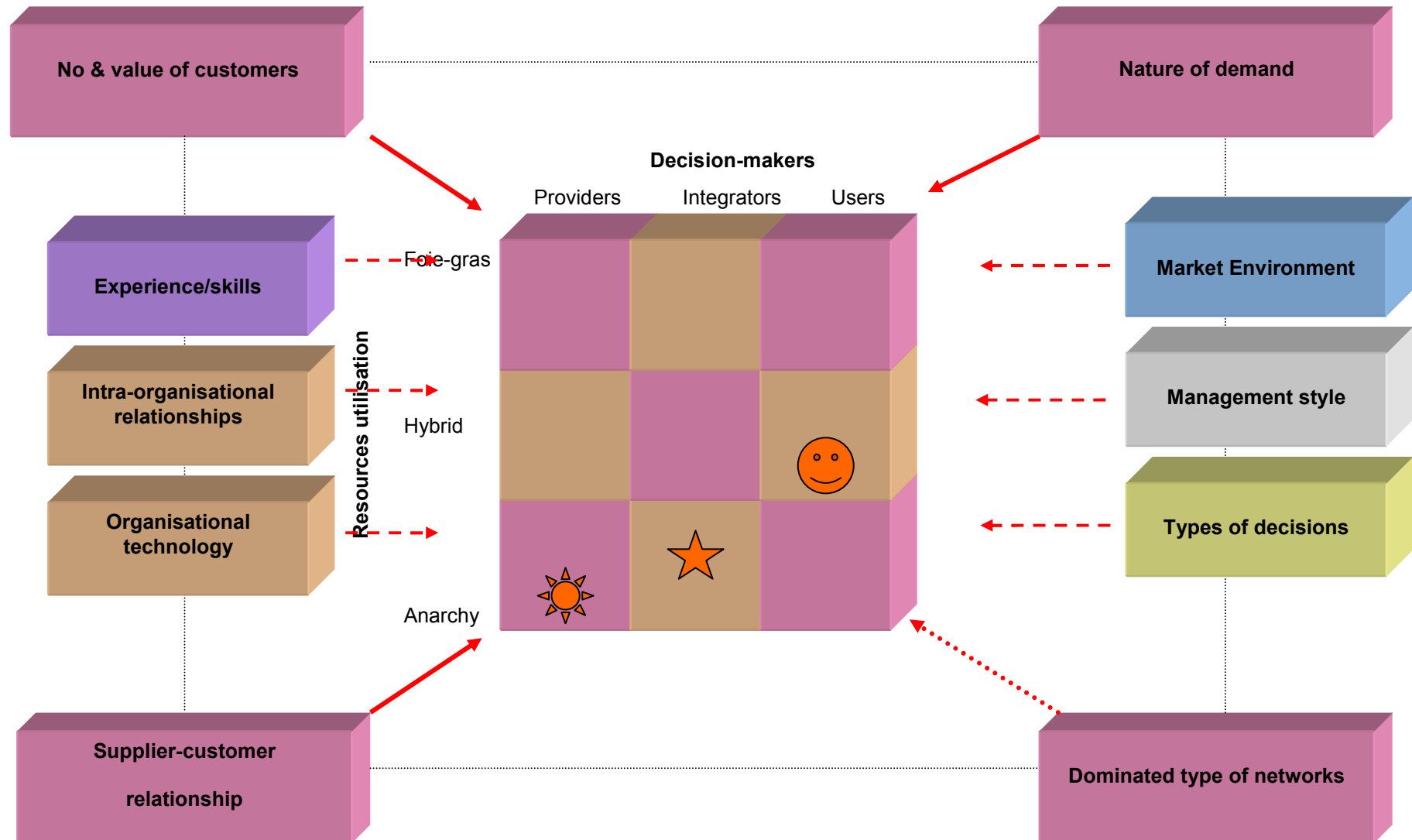
As can be seen from many examples, for different decisions the decision-makers act differently. Types of decisions, thus, influence the ways decision-makers utilise the resources. According to the literature chapter, types of decisions were classified into programmed and non-programmed decisions. In this case, most decisions regarding the programmed decisions, such as product allocation and credit authorisation, the respondents tend to employ a foie-gras approach, as they know where they can gather information. On the other hand, the non-programmed decisions like for a new application

development or a new product development, the decision-makers performed more anarchically.

As a result of the interviews, management style of the organisation was found to influence the ways the decision-makers utilise the resources. The company has been established as a family-run business, although it has been influenced by Western management styles. The organisation is operated on a mixture of Eastern and Western styles, a combination of traditional Chinese family business and typical American styles. Thus, the management was somewhat rigid in terms of systems and organisation but flexible in that they treat all employees as members of their family. With this management style, the owner did not force the employees to utilise resources in the ways s/he preferred, but allowed them to choose their own ways to utilise resources to support their decisions.

Apart from the B2B-related factors discussed in chapter 7, there are also other factors that influence resource utilisation. These factors were discussed in the literature to affect resource utilisation. Figure 8.4 also illustrated these factors that affect the resources utilisation of the decision-makers in this case. These other factors are experience and skills of the decision-makers, organisational technology, intra-organisational relationships, market environment, types of decisions, and management styles. Parallel with the other two cases, figure 8.5 uses red solid arrows to link the great influences on resource utilisation, and dash arrows show the links of the other factors that affect how each actor utilises resources. These factors were somewhat interdependent with each other.

Figure 8.4: The Olympic resulting framework



## **8.4 Cross-cases analysis**

In this thesis, discussions on individual case findings were presented in Chapters 5, 6, 7 as well as the early sections in this chapter. It is time to examine the results of the three cases in terms of both similarities and differences. In fact, each case has its own characteristics that led to variations in resource utilisation. This section begins with a brief discussion of reasons to conduct a cross-case analysis (section 8.4.1), then is followed by methods employed to analyse data in section 8.4.2. After that, the cross-case analysis is illustrated by introducing a table to compare and contrast the findings of the three cases in section 8.4.3.

### **8.4.1 Reasons for conducting cross-case analysis**

Miles and Huberman (1994: 172-173) stated two reasons to conduct a cross-case analysis. The first reason is “to enhance the generalisability of the study” (Miles *et al.* 1994: 173), to provide more precise answers to the research questions. In addition, this will address the question raised by Miles and Huberman: “Do these findings make sense beyond this specific case?” (Miles *et al.* 1994: 173). Comparing and contrasting the results from each case will help draw a conclusion based on the similarities and dissimilarities of the findings. The second reason is to “deepen an understanding and explanation of the study” (Miles *et al.* 1994: 173). Comparison of results will help search for “negative cases to strengthen the theory” (Miles *et al.* 1994: 173), which could be built through the discussion of the differences and similarities. These two reasons were also the main reasons to conduct cross-case analysis in this thesis.

### **8.4.2 Methods of analysis**

The methods employed to analyse the data were discussed in Chapter 4, comprising three general strategies and four specific analytic techniques. The analytic techniques are pattern matching, explanation building, logic models, and cross-case synthesis. The first three analytic techniques were employed in performing individual case analysis as well as cross-case synthesis (Yin 2002: 133). The data were analysed across the three organisations to detect similarities and dissimilarities of variables and case characteristics. Specifically, evidence obtained from each case was coded using factors and sub-factors listed in the conceptual frameworks (figures 2.8, 2.9 and 3.2). After the coding was done in the NVIVO, data analysis

started with individual cases, then the factors that generated significant influences on resource utilisation became more precise. These factors were then employed as variables to compare and contrast the results from each case including its characteristics. This method is referred to as “variable-oriented strategy” (Miles *et al.* 1994: 173-177). In variable-oriented strategy, the researcher would generally search for “themes” that cross cases, which is sometimes referred to as “pattern clarification” (Eisenhardt 1989a). In this research, themes were the node names or tree names given during the coding process. In order to compare and contrast the findings of each case, the resulting frameworks shown in figures 8.1, 8.3, and 8.4 were utilised to illustrate similarities and dissimilarities.

#### **8.4.3 Compare and contrast the results from the three cases**

This section examines the similarities and dissimilarities of the results from the three cases. Table 8.4 presents factors and sub-factors determined to influence the ways the respondents utilise resources and their effects. According to the discussion in the literature chapter, factors influencing resource utilisation are classified into five groups: personal and interpersonal, organisational, B2B, macro-environment, and other related factors (Kotler 2001; Webster *et al.* 1972). Each factor comprises various sub-factors as presented in chapter 2. Table 8.4 has sorted the findings according to this classification. Some of these factors were found to have similar effects on the resource utilisation in every case; some have influenced the actors to act differently in each case and some were found to have influenced some groups of actors.



**Table 8.4: Cross-Case Comparisons**

FACTORS		NY SUGAR		SIAM CITY CEMENT			OLYMPIC		
MAIN FACTORS	SUB-FACTORS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS
INDIVIDUAL AND INTER-PERSONAL FACTORS	EXPERIENCE/SKILLS	▪ POSITIVELY CORRELATED TO ANARCHY	▪ POSITIVELY CORRELATED TO ANARCHY	▪ NOT SIGNIFICANT	▪ 1ST:NEGATIVELY CORRELATED TO ANARCHY ▪ 2ND: POSITIVELY CORRELATED TO ANARCHY	▪ 1ST:NEGATIVELY CORRELATED TO ANARCHY ▪ 2ND: POSITIVELY CORRELATED TO ANARCHY	▪ POSITIVELY CORRELATED TO ANARCHY	▪ POSITIVELY CORRELATED TO ANARCHY	▪ POSITIVELY CORRELATED TO ANARCHY
ORGANISATIONAL RELATED FACTORS	ORGANISATIONAL STRUCTURE	▪ RELATIVELY ORGANIC ORGANISATION LED TO RELATIVELY MORE ANARCHY	▪ RELATIVELY ORGANIC ORGANISATION LED TO RELATIVELY MORE ANARCHY	▪ RELATIVELY MECHANIC ORGANISATION LED TO RELATIVELY MORE FOIE-GRAS	▪ 1ST:RELATIVELY MECHANIC ORGANISATION LED TO RELATIVELY MORE ANARCHY ▪ 2ND: RELATIVELY MECHANIC ORGANISATION LED TO RELATIVELY MORE FOIE-GRAS	▪ 1ST:RELATIVELY MECHANIC ORGANISATION LED TO RELATIVELY MORE ANARCHY ▪ 2ND: RELATIVELY MECHANIC ORGANISATION LED TO RELATIVELY MORE FOIE-GRAS	▪ RELATIVELY MECHANIC ORGANISATION LED TO RELATIVELY MORE FOIE-GRAS	▪ RELATIVELY MECHANIC ORGANISATION LED TO RELATIVELY MORE FOIE-GRAS	▪ RELATIVELY MECHANIC ORGANISATION LED TO RELATIVELY MORE FOIE-GRAS

**Table 8.4: Cross-Case Comparisons (cont.)**

FACTORS		NY SUGAR		SIAM CITY CEMENT			OLYMPIC		
MAIN FACTORS	SUB-FACTORS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS
ORGANISATIONAL RELATED FACTORS	INTRA- ORGANISATIONAL RELATIONSHIPS	▪ TRUST/CONFIDENT IN OTHERS LED TO MORE ANARCHY	▪ TRUST/CONFIDENT IN OTHERS LED TO MORE ANARCHY	▪ NOT SIGNIFICANT	▪ 1ST: NO TRUST IN OTHER SOURCES OF INFORMATION LED TO RELATIVELY ANARCHY ▪ 2ND: TRUST IN OTHER PEOPLE LED TO RELATIVELY ANARCHY	▪ 1ST: TRUST IN OTHER PEOPLE LED TO RELATIVELY ANARCHY ▪ 2ND: TRUST IN OTHER PEOPLE LED TO RELATIVELY FOIE-GRAS	▪ RELATIVELY NO CONFLICT LED TO MORE ANARCHY	▪ RELATIVELY NO CONFLICT LED TO MORE ANARCHY	▪ RELATIVELY NO CONFLICT LED TO MORE ANARCHY
	ORGANISATIONAL TECHNOLOGY	▪ BASIC TO INTERMEDIATE LEVELS RESULTED IN RELATIVELY MORE ANARCHY	▪ BASIC TO INTERMEDIATE LEVELS RESULTED IN RELATIVELY MORE ANARCHY	▪ ADVANCED LEVELS WITH A FORCE TO USE RESULTED IN RELATIVELY FOIE-GRAS	▪ 1ST: ADVANCED LEVELS WITH A FORCE TO USE RESULTED IN RELATIVELY FOIE-GRAS ▪ 2ND: ADVANCED LEVELS WITH A FORCE TO USE RESULTED IN RELATIVELY ANARCHY	▪ 1ST: ADVANCED LEVELS BUT NOT COVER THEIR REQUIREMENTS RESULTED IN RELATIVELY ANARCHY ▪ 2ND: ADVANCED LEVELS WITH A FORCE TO USE RESULTED IN RELATIVELY FOIE-GRAS	▪ ADVANCED LEVELS WITH NO FORCE TO USE RESULTED IN RELATIVELY ANARCHY	▪ ADVANCED LEVELS WITH NO FORCE TO USE RESULTED IN RELATIVELY ANARCHY	▪ ADVANCED LEVELS WITH NO FORCE TO USE RESULTED IN HYBRID TOWARD ANARCHY

Table 8.4: Cross-Case Comparisons (cont.)

FACTORS		NY SUGAR		SIAM CITY CEMENT			OLYMPIC		
MAIN FACTORS	SUB-FACTORS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS
B2B RELATED FACTORS	NO & VALUE OF CUSTOMERS	<ul style="list-style-type: none"> <li>VALUE OF CUSTOMERS DETERMINED BY SALES VOLUME AND RELATIONSHIP POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>VALUE OF CUSTOMERS DETERMINED BY SALES VOLUME AND RELATIONSHIP POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>THEIR CUSTOMERS ARE INTERNAL E.G. EVP, THEIR BOSSES WHICH HAS POSITIVELY CORRELATED WITH TO FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>1<sup>ST</sup>: CUSTOMERS, END-USERS AND INTERNAL PEOPLE ARE THEIR CUSTOMERS WHOSE VALUE AND POWER IS POSITIVELY CORRELATED TO ANARCHY</li> <li>2<sup>ND</sup>: CUSTOMERS ARE ONLY THEIR CUSTOMERS, VALUE WERE DETERMINED BY VOLUME AND RELATIONSHIP WHICH RESULTED IN POSITIVELY CORRELATED WITH TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>1<sup>ST</sup>: CUSTOMERS AND END-USERS ARE THEIR CUSTOMERS WHOSE VALUE AND POWER IS POSITIVELY CORRELATED TO ANARCHY</li> <li>2<sup>ND</sup>: 1<sup>ST</sup>: CUSTOMERS, END-USERS AND INTERNAL PEOPLE ARE THEIR CUSTOMERS WHOSE VALUE AND POWER IS POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>IRRELEVANCE</li> </ul>	<ul style="list-style-type: none"> <li>CUSTOMERS ARE BOTH CUSTOMERS AND END-USERS. VALUE OF CUSTOMERS DETERMINED BY NO OF BRANDS THE CUSTOMER SALES AND RELATIONSHIP WHICH RESULTED IN POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>CUSTOMERS ARE BOTH CUSTOMERS AND END-USERS. VALUE OF CUSTOMERS DETERMINED BY NO OF BRANDS THE CUSTOMER SALES AND RELATIONSHIP WHICH RESULTED IN POSITIVELY CORRELATED TO ANARCHY</li> </ul>

**Table 8.4: Cross-Case Comparisons (cont.)**

FACTORS		NY SUGAR		SIAM CITY CEMENT			OLYMPIC		
MAIN FACTORS	SUB-FACTORS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS
<b>B2B RELATED FACTORS</b>	RELATIONSHIPS WITH CUSTOMERS	▪ LONG-TERM CUSTOMERS / CLOSE RELATIONSHIP CUSTOMERS IS POSITIVELY CORRELATED TO ANARCHY	▪ LONG-TERM CUSTOMERS / CLOSE RELATIONSHIP CUSTOMERS IS POSITIVELY CORRELATED TO ANARCHY	▪ IRRELEVANCE	▪ LONG-TERM CUSTOMERS / CLOSE RELATIONSHIP CUSTOMERS IS POSITIVELY CORRELATED TO ANARCHY	▪ LONG-TERM CUSTOMERS / CLOSE RELATIONSHIP CUSTOMERS IS POSITIVELY CORRELATED TO ANARCHY	▪ IRRELEVANCE	▪ LONG-TERM CUSTOMERS / CLOSE RELATIONSHIP CUSTOMERS IS POSITIVELY CORRELATED TO ANARCHY	▪ LONG-TERM CUSTOMERS / CLOSE RELATIONSHIP CUSTOMERS IS POSITIVELY CORRELATED TO ANARCHY
	NATURE OF DEMAND	▪ DERIVED FROM END-USERS => POSITIVELY CORRELATED TO ANARCHY	▪ DERIVED FROM END-USERS => POSITIVELY CORRELATED TO ANARCHY	▪ IRRELEVANCE	▪ DERIVED FROM END-USERS => POSITIVELY CORRELATED TO ANARCHY	▪ DERIVED FROM END-USERS => POSITIVELY CORRELATED TO ANARCHY	▪ IRRELEVANCE	▪ DERIVED FROM END-USERS => POSITIVELY CORRELATED TO ANARCHY	▪ DERIVED FROM END-USERS => POSITIVELY CORRELATED TO ANARCHY
	DOMINANT TYPE OF NETWORK	▪ IRRELEVANCE	▪ IRRELEVANCE	▪ IRRELEVANCE	▪ IRRELEVANCE	▪ 1 <sup>ST</sup> : DISTRIBUTION IS POSITIVELY CORRELATED TO ANARCHY ▪ 2 <sup>ND</sup> : NOT SIGNIFICANT	▪ IRRELEVANCE	▪ DISTRIBUTION NETWORK IS POSITIVELY CORRELATED TO ANARCHY	▪ DISTRIBUTION NETWORK IS POSITIVELY CORRELATED TO ANARCHY

**Table 8.4: Cross-Case Comparisons (cont.)**

FACTORS		NY SUGAR		SIAM CITY CEMENT			OLYMPIC		
MAIN FACTORS	SUB-FACTORS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS
MACRO-ENVIRONMENT RELATED FACTORS	POLITICAL SITUATION – GOVERNMENT POLICIES	<ul style="list-style-type: none"> <li>GOVERNMENT CONTROL OVER MANY IMPORTANT FACTORS RESULTED IN POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>GOVERNMENT CONTROL OVER MANY IMPORTANT FACTORS RESULTED IN POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>IRRELEVANCE</li> </ul>	<ul style="list-style-type: none"> <li>1<sup>ST</sup>: GOVERNMENT MONITOR OVER RETAIL PRICES RESULTED IN POSITIVELY CORRELATED TO ANARCHY</li> <li>2<sup>ND</sup>: NOT SIGNIFICANT</li> </ul>	<ul style="list-style-type: none"> <li>1<sup>ST</sup>: NOT SIGNIFICANT</li> <li>2<sup>ND</sup>: GOVERNMENT MONITOR OVER RETAIL PRICES RESULTED IN POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>GOVERNMENT HAS NO EFFECT ON THE INDUSTRY</li> </ul>	<ul style="list-style-type: none"> <li>GOVERNMENT HAS NO EFFECT ON THE INDUSTRY</li> </ul>	<ul style="list-style-type: none"> <li>GOVERNMENT HAS NO EFFECT ON THE INDUSTRY</li> </ul>
	MARKET ENVIRONMENT	<ul style="list-style-type: none"> <li>HIGHLY DYNAMIC IS POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>HIGHLY DYNAMICS POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>IRRELEVANCE</li> </ul>	<ul style="list-style-type: none"> <li>HIGHLY DYNAMICS POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>HIGHLY DYNAMICS POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>IRRELEVANCE</li> </ul>	<ul style="list-style-type: none"> <li>HIGHLY DYNAMICS POSITIVELY CORRELATED TO ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>HIGHLY DYNAMIC .IS POSITIVELY CORRELATED TO ANARCHY</li> </ul>

**Table 8.4: Cross-Case Comparisons (cont.)**

FACTORS		NY SUGAR		SIAM CITY CEMENT			OLYMPIC		
MAIN FACTORS	SUB-FACTORS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS	PROVIDERS	INTEGRATORS	USERS
OTHER RELATED FACTORS	TYPES OF DECISIONS	<ul style="list-style-type: none"> <li>PROGRAMME DECISION IS POSITIVELY CORRELATED TO FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>PROGRAMME DECISION IS POSITIVELY CORRELATED TO FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>PROGRAMME DECISION IS POSITIVELY CORRELATED TO FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>PROGRAMME DECISION IS POSITIVELY CORRELATED TO FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>PROGRAMME DECISION IS POSITIVELY CORRELATED TO FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>PROGRAMME DECISION IS POSITIVELY CORRELATED TO FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>PROGRAMME DECISION IS POSITIVELY CORRELATED TO FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>PROGRAMME DECISION IS POSITIVELY CORRELATED TO FOIE-GRAS</li> </ul>
	LEVELS OF DECISIONS	<ul style="list-style-type: none"> <li>STRATEGIC = ANARCHY</li> <li>MANAGEMENT = HYBRID TOWARD ANARCHY</li> <li>OPERATION = HYBRID TOWARD ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>STRATEGIC = ANARCHY</li> <li>MANAGEMENT = HYBRID TOWARD ANARCHY</li> <li>OPERATION = HYBRID TOWARD ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>STRATEGIC = HYBRID TOWARD FOIE-GRAS</li> <li>MANAGEMENT = HYBRID TOWARD FOIE-GRAS</li> <li>OPERATION = HYBRID TOWARD FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>STRATEGIC = HYBRID TOWARD ANARCHY</li> <li>MANAGEMENT = HYBRID TOWARD ANARCHY</li> <li>OPERATION = HYBRID TOWARD ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>STRATEGIC = ANARCHY</li> <li>MANAGEMENT = HYBRID TOWARD ANARCHY</li> <li>OPERATION = HYBRID TOWARD ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>STRATEGIC = HYBRID TOWARD FOIE-GRAS</li> <li>MANAGEMENT = HYBRID TOWARD FOIE-GRAS</li> <li>OPERATION = HYBRID TOWARD FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>STRATEGIC = HYBRID TOWARD ANARCHY</li> <li>MANAGEMENT = HYBRID TOWARD ANARCHY</li> <li>OPERATION = HYBRID TOWARD ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>STRATEGIC = ANARCHY</li> <li>MANAGEMENT = HYBRID TOWARD ANARCHY</li> <li>OPERATION = HYBRID TOWARD ANARCHY</li> </ul>
	MANAGEMENT STYLES	<ul style="list-style-type: none"> <li>A FAMILY-RUN BUSINESS LED TO RELATIVELY ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>A FAMILY-RUN BUSINESS LED TO RELATIVELY ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>WESTERN STYLE LED TO A FORCE TO USE FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>WESTERN STYLE LED TO A FORCE TO USE FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>WESTERN STYLE LED TO A FORCE TO USE FOIE-GRAS</li> </ul>	<ul style="list-style-type: none"> <li>A MODERN FAMILY-RUN BUSINESS LED TO HYBRID TOWARD ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>A MODERN FAMILY-RUN BUSINESS LED TO HYBRID TOWARD ANARCHY</li> </ul>	<ul style="list-style-type: none"> <li>A MODERN FAMILY-RUN BUSINESS LED TO HYBRID TOWARD ANARCHY</li> </ul>

As can be seen in the table, the experience of the decision-makers generated similar effects on the way decision-makers utilise resources. The more experience they have, the more anarchy they employed. Only the personal and interpersonal factors have a noteworthy influence on resource utilisation. Relationships with customers produced effects on resource utilisation in such a way that decision-makers employed relatively more anarchy when making decisions regarding long-term or customers with close relationships. This influence somewhat corresponds with proposition 2. Similar to the nature of demand, sugar and cement are standardised products, but roof-tiles and artificial woods are somewhat customised. The demand for products, however, was derived from both customers and end-users especially in the domestic market. When the demand was derived only from customers, the decision-makers could only employ data provided by the systems, if it was sufficient. The nature of demand could therefore be concluded to have a positive relationship with anarchic resource utilisation. The more information required regarding end-users, the more anarchic they performed to generate decision-support. Another factor that generated a similar effect to every respondent is types of decisions: programmed and non-programmed. The programmed decisions were usually systematic and sequenced, but the non-programmed ones were the opposite. These five factors produced effects that were similar to the ways decision-makers utilise resources to support their decisions.

Some other factors were determined to influence resource utilisation of the decision-makers differently in each case. These factors were organisational structure, intra-organisation relationships, organisational technology, number and value of customers, and levels of the decisions. Relationships between organisational structure and resources utilisation varied between groups of decision-makers in Siam City Cement. This factor had an impact on the resource utilisation of the decision-makers. The results suggested that the more organic each organisation was, the more anarchy they employed. There were also negatives: These two groups perceived that information provided by the systems was somewhat inaccurate and insufficient; however, if they were provided with accurate and sufficient information, they would utilise resources in a manner similar to the others.

The evidence showed that in intra-organisational relationships trust and confidence in others led to relatively more anarchy for decision-makers in NY Sugar and Olympic. In contrast, this produced various effects on decision-makers in Siam City Cement. In Siam City Cement, the analysts and the second users group performed highly anarchic ways to utilise resources simply because they do not trust the ones who provide data/information. However, salespersons and the first users group performed the highly anarchic ways when they trust the others who provide data/information. Levels of organisational technology also affect the ways decision-makers utilise resources. The results suggested that with relatively advanced technology, the decision-makers were more utilise resources in a more foie-gras ways. Without being forced to use the technology in Olympic, the systems are capable of generating decision-support, but the decision-makers enjoyed their own ways of utilising resources. However, when forced to use the technology, the decision-makers of Siam City tend to use the resources as they see fit.

The value of customers could determine the power of customers. In general, the findings implied that when decision-makers making decisions regarding high power customers, they tend to employ more anarchic way to utilise resources. Except in the case of Siam City Cement, they performed relatively foie-gras when dealing with higher power customers, especially the EVP. This may be caused by different view of who their customers are. In addition, results of the interviews also suggested that levels of decisions influence the way decision-makers utilise resources, as shown in table 8.4. However, no specific relationship could be concluded as different groups of decision-makers indicated dissimilar patterns regarding different levels of decisions. This result could be caused by not having many respondents who deal with different levels of decisions, only a few respondents deal with all levels. Dominant type of network is one of the main focuses of this research; however, it influences only a few respondents who deal with both suppliers and customers. The distribution network is dominant in both cases, resulting in relatively more anarchic way to utilise the resources for those who were affected. However, evidence was insufficient to claim that the type of network influenced the resource utilisation of decision-makers.



*“Irrelevance”*, shown in the table 8.4, illustrates that the respondents were not responsible for or did not directly deal with the particular decisions. For example, the providers had almost no chance to deal with the customers or the end-users even if they would like to; factors related to customers or end-users have little effect on the ways they utilise resources. Similarly, government policies would create an enormous impact on industries under their control, such as the sugar industry, but the effect of these policies would be indifferent to companies not under their control, e.g. Olympic. However, for the cement industry, the government has partial control over prices; decision-makers who dealt with pricing decisions were the only ones who were affected by the changes. All in all, the ways these decision-makers utilise resources were positively correlated to the anarchic way of resource utilisation, i.e., the greater the power of the government, the more anarchic ways they employed.

The management style of each company is another factor that emerged during the data analysis. The three cases employed somewhat dissimilar management styles. NY Sugar is a family-run business; the management style is referred to as “traditional Chinese style” in this study. Siam City Cement changed from a family-run business to Western style since it was taken over by Holcim. Olympic is a family-run business influenced by Western style; the management style is referred to as “a modern family-run business”. With these different styles, the decision-makers exercised resources in various ways. The results, however, suggested that there is an association between a family-run style and the anarchic way of resource utilisation, and Western style and the foie-gras end. The mixtures of both systems were between the two extremes. Figure 8.5 illustrated the research results by presenting all factors that could affect the resource utilisation of the three groups of decision-makers from the three cases. The yellow refers to the NY Sugar’s decision-makers. Siam City Cement decision-makers are shown by the red colour, and the orange refers to Olympic’s decision-makers.

[illegible]

## 8.5 Strengths and weaknesses

Evidence of each case illustrated the ways each group of decision-makers utilise resources differently as the decision-makers worked in distinct environments influenced by factors discussed in the previous section. Although each organisation provided their actors with different sets of resources, advantages and disadvantages could be found when comparing the three cases. Table 8.5 summarises the strengths and weaknesses of the three cases: NY Sugar, Siam City Cement, and Olympic. The evidence shows that the decision-maker in NY Sugar enjoyed his own way of resource utilisation in which he has private data or information in his database and could obtain data from other external sources using his relationships. This could cause the company a huge problem when he leaves the company as he could become irreplaceable. Given what the company provided to their employees, it may take a long time and a huge budget to gather facts to support his decisions. He could reach solutions faster if he had sufficient support or make decision on the spur of the moment; it however could be considered a risky solution.

**Table 8.5: Strengths and Weakness found from the three cases**

Cases	Strengths	Weaknesses
<b>NY Sugar</b>	<ul style="list-style-type: none"> <li>Few conflicts between people in organisation</li> <li>Fast decisions</li> <li>Good relationship with customers and suppliers</li> <li>Decision-maker has relatively high experience in working in the industry</li> </ul>	<ul style="list-style-type: none"> <li>Everything relies on a person, which could be problem if s/he leaves the company</li> <li>Different decision-makers may reach different solution because they may obtain different decision-support</li> <li>Take time and budget to gather decision-support on ad-hoc basis</li> </ul>
<b>Siam City Cement</b>	<ul style="list-style-type: none"> <li>Advanced technology provided</li> <li>Information sharing throughout the organisation with level of access</li> <li>Decision-makers could obtain decision-support readily from the systems</li> <li>Everyone make decisions based on similar sets of facts</li> </ul>	<ul style="list-style-type: none"> <li>Most people in the organisation are unhappy with the situation</li> <li>Relatively many conflicts within organisation</li> <li>Inaccurate information in the systems, which sometime leads to ineffective decisions</li> <li>Huge investment on SAP</li> <li>Delayed of decisions</li> </ul>

		dissatisfied the customers <ul style="list-style-type: none"> <li>Decision-makers have relatively less experience</li> </ul>
Olympic	<ul style="list-style-type: none"> <li>Fewer conflicts in organisation</li> <li>Decision-makers enjoy their freedom</li> <li>Healthy relationship with some customers i.e. Super Mono and Mono</li> <li>Decision-makers have relatively greater experience</li> </ul>	<ul style="list-style-type: none"> <li>Waste of money invested in implementation of the systems</li> <li>Difficult to obtain decision-support as it was not stored in any systems</li> <li>Information provided by various people is sometime different</li> <li>Waste of time to search for decision-support from various sources</li> </ul>

Siam City Cement offers advanced technology to assist the actors and forces them to use it; the users and the integrators were somewhat unhappy with the situation, which resulted in inaccurate or outdated information stored in the database. The systems offered them decision-support for relatively less cost, but prior to that the company invested huge amounts of money to implement and maintain the systems, especially SAP. The systems also provided the decision-makers with similar sets of facts to support their decisions so they would easily reach similar solutions. On the other hand, Olympic offers their decision-makers technology similar to what Siam City Cement uses, but does not force employees to use it. The evidence showed that the actors seem happier with the situation that allowed them to utilise the resources in their own ways. Yet, it resulted in the decision-makers making decisions based on different sets of facts gathered from various sources. This caused delays, different solutions/outcomes, and sometimes time wasted searching and verifying the data. Nonetheless, the company enjoys the fact that their decision-makers have a lot of experience and understand the market quite well so they can easily digest the data/information they obtained from the various sources.

It is difficult to say which one is the best method of resource utilisation as each of them has both strengths and weaknesses, but the actors could choose which one is the most appropriate for them based on their existing

resources and their environments. Based on an understanding of resource utilisation and the factors that influence the way they utilise the resources, the weaknesses could be minimised or eliminated by taking good points from other cases, which will be recommended in the next chapter.

## **8.6 Conclusion**

This chapter presented a summary of each case as well as similarities and differences of the resource utilisation of each group of decision-makers working in different environments. The providers utilise resources in a relatively foie-gras way in one case—Siam City Cement—and in a relatively anarchy way in another—Olympic. The integrators greatly fluctuated in their ways of utilising resources, but their resource utilisation was generally a hybrid of the two extremes with leaning toward the anarchy end. The users' resource utilisation varied according to the environment from the hybrid of the two extremes to the ways that lean on anarchy end. Many factors were determined to produce great effects on the resource utilisation of these decision-makers. Three B2B factors—value of customers, relationships with customers, and nature of demand—generated enormous influence on resource utilisation. Moreover, other factors like experience, organisational technologies, and management styles, were revealed during the interviews to produce great influence on the resources utilisation. All in all, these factors seem to be interdependent on each other; a change in one of them could result in shifting in the way they utilise the resources. In the next chapter, a conclusion is finally drawn to answer the research questions and to summarise briefly the contributions and limitations of this study, and practical recommendations and potential further research will be discussed.

## **CHAPTER 9**

### **DISCUSSION AND CONCLUSION**

#### **9.0 Introduction**

This final chapter summarises and discusses the progress made in achieving the aims of this research, reminds the readers of key points accomplished so far in this thesis, and synthesises these into a coherent body of understanding. This chapter begins with a brief summary of the results related to the research questions. Reflections on the literature are then presented to explicitly link the findings with the literature. This is followed by a brief discussion about the contributions of this research to marketing and information systems, with recommendations for practitioners that emerge from the findings. The limitations in this research are discussed, including a critique of the weaknesses as well as a view on other approaches that could have been taken. A section called 'personal reflections' has also been added to illustrate the researcher's feelings whilst conducting this study. The last section contains a brief summary of the key results.

#### **9.1 A summary of the key research findings**

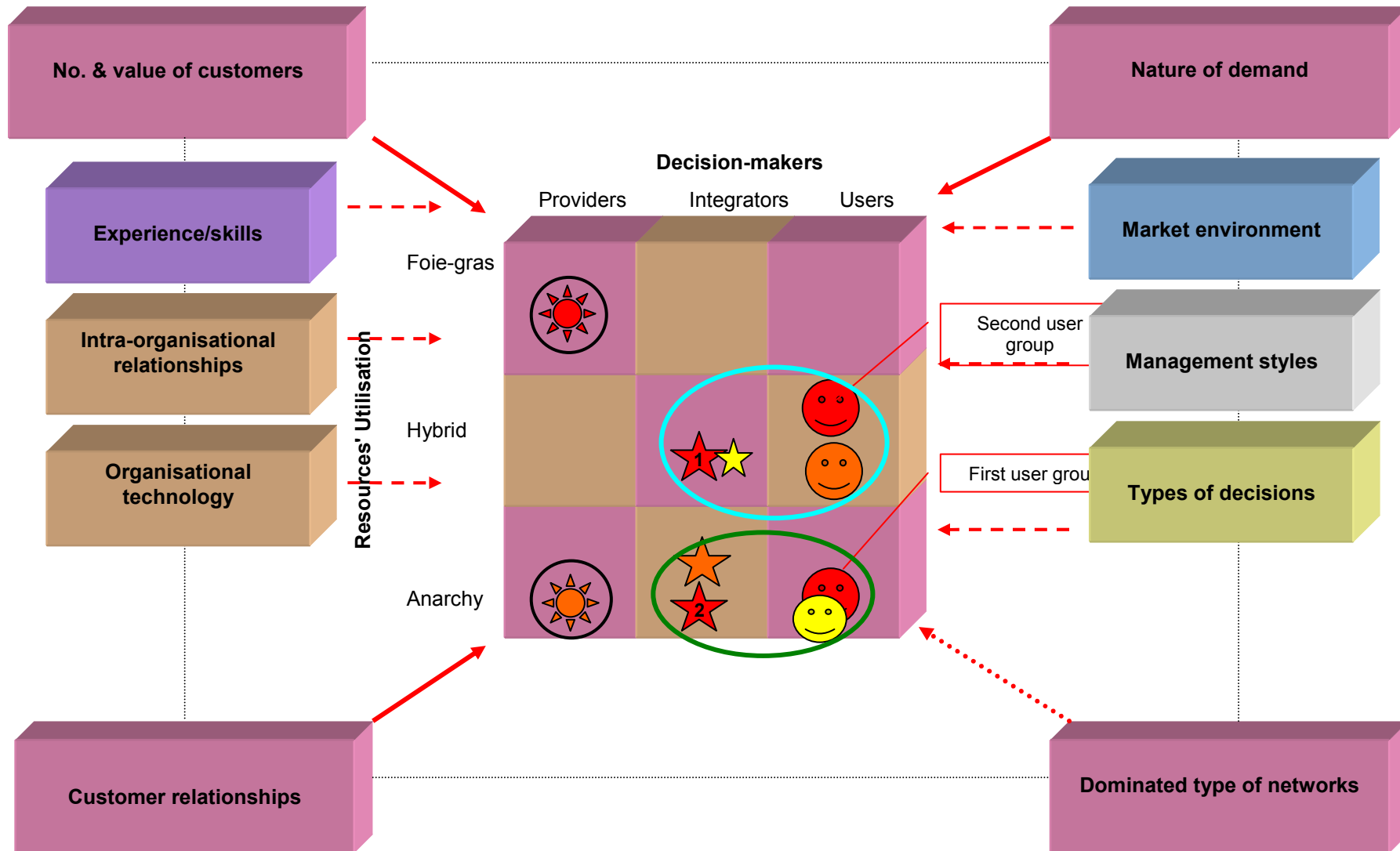
The central aim of this study was to understand how actors interact with their resources: how MkIS and its surrounding networks interact to obtain a desired form of decision-support. The study showed that actors utilise the resources in a way that lies somewhere in a continuum between foie-gras and anarchy. Foie-gras is a very highly structured, systematic and sequential way of resource utilisation, in contrast to anarchy which is a very loose and non-systematic way of resource utilization. The findings show that none of the actors utilised their resources in a manner encapsulated by either of these extremes. They all utilised their resources employing a combination.

Figure 9.1 summarises the results from the three case-studies. Providers working in different organisations, Siam City Cement and Olympic, in a similar industry and environment, used their resources in different ways (i.e., relative foie-gras for Siam City Cement's providers and relative

anarchy for Olympic's providers). This shows the influences of other factors, such as personal and inter-personal factors, organisational related-factors and management styles. The integrators and users can be classified into two groups based on their resource utilisation. The first group was those who utilised resources in a hybrid fashion in a mixture of the two extremes, as shown in Figure 9.1 (see bright blue circle). This group consists of analysts and the second user group comprised of Siam City Cement, the integrator from NY Sugar, and the users from Olympic. In general, actors in this group were those who had some degree of faith in their resources, yet sometimes needed to verify the data/information, or gather other relevant data not provided by existing resources. They usually had both access and control over their resources. The second set of groups consisted of those who utilise their resources in relative anarchy, as illustrated in Figure 9.1 (see green circle). These members were the salespersons and the first user group from Siam City Cement, the users from NY Sugar, and the integrators from Olympic. In general, within this group, most actors preferred to create decision-support by themselves for a variety of reasons. They had access to their resources, but may or may not have had full control over them. They did not always rely on what they were given, or may have provided inaccurate data/information for these systems, which resulted in unreliable outcomes for other users. These two groups utilise their resources in a different manner due to the factors listed in Figure 9.1. However, their relationships with customers produced the greatest influence upon the ways they utilised the resources.

The nature and respective roles of foie-gras and anarchy was influenced by a variety of factors. These factors were influenced by the resource utilisation of B2B decision-makers. Figure 9.1 illustrates the resource utilisation of B2B decision-makers and the factors that influence them. The factors that have a great influence on resource utilisation were: (1) their experience/skills, (2) intra-organisational relationships, (3) organisational technology, (4) number and value of customers, (5) supplier-customer relationships, (6) nature of demand, (7) market environment, (8) management styles, and (9) types of decisions.

Figure 9.1: Resultant Framework of this Research





There were also other factors that could influence the interaction between the actors and their resources, such as dominant networks, organisational structure, and the political situation, as set out in Table 8.4. However, these factors were found to have a minimal impact on the respondents interviewed, with insufficient evidence to draw any firm conclusions.

## **9.2 Reflections on the literature**

This section makes links between the case research analysis and the literature presented in Chapter 2. This exploration allows integration and understanding of the concepts, and helps to identify gaps in the literature for future research. The research in this study was grounded on a “Markets-as-Networks” approach (Hakansson *et al.* 2004; Hakansson *et al.* 1995) employing the ARA model as a framework for studying the interaction between decision-makers and their resources. In general, the cases showed that in B2B markets, relationships involved continuity, complexity, symmetry and informality, as proposed by Hakansson (1995: 7-8). Moreover, the relationships were not confined to only business relationships but also personal ones. Decision-makers dealt with these elements at different levels, with differing degrees of complexity and informality. However, all of them continued until the actors moved on to other positions, and they had to introduce other actors to continue their business relationships, otherwise their business would cease. These relationships also gave a sense of the dynamic as well as static environment that the decision-makers and B2B organisations live in.

B2B organisations three layers, as stated in the ARA model, namely actors, resources, and activities. This research divided the actors or decision-makers into three groups: providers, integrators and users as presented in the conceptual framework. As its name implies, the providers are the ones who provide the resources to both the integrators and the users. The users are those who solely use resources provided by the providers, sometimes through a channel of integrators. These integrators to some extent straddle the roles of both providers and users, and strive to make valid and productive connections between the two actors. The results also confirmed that decision-makers can act as provider, user, or integrator in making a decision, and that they rarely take on more than one role at a time. The actors in this study showed the five characteristics proposed by Hakansson

(2002: 145-146); they performed and controlled activities, developed relationships with each other through exchange processes, they were goal-oriented, and had differential knowledge about their activities, resources, and other actors in the network. These characteristics also influenced their resource utilisation, as well as the ways they made decisions.

Resources in the context of this study can be seen as the MkIS. The findings of the case research showed that MkIS exists in the three forms of human resources, physical facilities and information systems. These three concepts are heterogeneous and mutually dependent on one another, as found by Baraldi (2003) and Hakansson *et al.* (2002, 1995). Heterogeneity means that there is always further ways of utilising resources to support decisions in different ways or settings. Mutually dependent refers to the use and value of any resources, depending on how the decision-makers combine them with other resources.

'Activities' or decision-making is another important layer of the ARA model. There is a great deal of research that focuses upon decision-making with many of these theories. In general, decision-making theories vary from coherence to chaos or from rational decision-making to a garbage can model (Miler et al. 1997). Moorhead and Griffin (1998) suggested a hybrid of approaches between these two bipolar extremes. The case research concurred with this, since most decision-makers interviewed employed a hybrid approach to utilising resources. The findings of this research showed that actors chose different ways to make decisions, and tended to avoid solely taking extreme methods. Actors sought to ensure the accuracy of their decision-support systems either from a force-feeding system or by gathering the information themselves; in other words, actors usually cross-check with other sources to ensure its quality and accuracy. These combinations may incline towards the axis presented in Figure 9.1 above, although no actors were found to be at either extreme.

The findings of this research also suggested that in making decisions, in any given activity cycle, both transfer and transformation activities occurred, except that in relation to resource activities, only one of the activities happened. The ARA model could be added so that not only actors but also the resources perform the activities. For example, a database

could transfer raw data from different databases and automatically generate meaningful information from combining the data together. Moreover, Hakansson and Johansson (2002) stated that transfer activities have never been controlled by a sole actor; the findings showed they could be controlled by a sole resource, namely IS. For example, this happened when a datasheet automatically retrieved data from other sheets. So, these transfer activities were performed by the IS, which can be controlled by a sole provider, such as the programmer, designer, or developer of the IS. This implies that an actor can possibly have indirect control over transfer activities that link transformation activities.

As discussed earlier, resource utilisation was influenced by five main factors. These were as follows: personal and interpersonal, organisational, B2B-, macro-environment and other related factors. Webster and Wind (1972) put forward a buying decision-making model that suggests four groups of factors that influence resource utilisation. These four groups are individual factors, the buying centre, organisational factors, and environmental factors. Moreover, Kotler (2001) also provides four groups of variables that influence industrial buying behaviour, namely individual, interpersonal, organisational and environmental factors. Compared the models of Webster and Wind and Kotler, the research findings in this study indicated an additional two groups of factors to influence marketing decision-making, including buying decision-making. These groups include B2B related factors and decision related factors including the types of decisions that influence resource utilisation. Moreover, the style of management should also be included under the organisational related factors. Since this thesis mainly focuses on B2B related factors, the importance of this factor needs stressing. The impact of B2B factors lies in: the number and value of customers, supplier-customer relationships, and the nature of demand. Collectively, these factors had various influences on the resource utilisation of decision-makers. The type of network was found not to have any significant influence in the case-studies since there was only one dominant type of network. Further research is required to explore the impact of different types of networks.

This study also suggested the influence of other factors (that are not B2B-related factors) on resource utilisation. Table 9.1 compares the findings in

this study with the findings in the academic literature, and whether these findings are proved or disproved. As clearly illustrated in Table 9.1, the experience/skills of the actors influenced resources utilisation decision-making, and this matched the suggestion of Kotler (2001). Only two organization-related factors were found to produce an impact, and these were intra-organisational relationships and organisational technology. The level of trust and confidence in others were proven to have a great influence on resource utilisation, as indicated in the literature presented in Chapter 2 (Bennett & Gabriel 2001; de Ruyter, Moorman, & Lemmink 2001; Elahee & Brooks 2004; Handfield & Bechtel 2002; Huemer 2004; Svensson 2004). Levels of technology in an organisation also influence the ways that actors utilise resources, especially when computer-based ISs are available in the company to support decisions. However, the influence of technology varied according to the perspectives and skills of the actors. The environmental-related factors which influenced resources utilisation were the market environment, especially the dynamics of the market. Although the variables of the political and economic situation were found to have no significant influence on the ways the actors utilise resources. These situations were important and influenced decision-making. Actors would not alter their resources utilisation if these situations changed, but they would use their resources to obtain decision-making support they required. Styles of Management is another variable that influenced utilisation, yet this was not discussed in the chapter on literature, and so it definitely needs further more detailed study. The last, but nonetheless important factor that influences resource utilisation, types of decisions whether it is programme or non-programme decisions (Miller *et al.* 1997; Simon, 1960).

Although the research results confirm that these factors (as listed in Table 9.1) influence the ways the actors utilise their existing resources, there are many other factors suggested by Webster and Wind (1972), Kotler (2001), Ashill *et al.* (2001) and other researchers which could have a significant influence on resource utilisation, especially those relating to personal and interpersonal, organisational, macro-environmental, and decision related factors. These were not the main focus of this research study. Therefore, it is recommended that further research is done to understand the influence of these factors on resource utilisation. The contributions of this research are now presented, as well as ideas for further research.

**Table 9.1: Factors and influences**

Factors	Literature/proposition	Findings	Revealed/disconfirmed
1) Experience/ skills	Kotler (2001) said that experience affects business buying behaviour.	The experience of the decision-makers influenced the resource utilisation. Those with more experience would utilise resources with relatively more anarchy.	The findings proved that the experiences of decision-makers influence resources utilisation.
2) Intra-organisational relationships	The literature suggested that relationships especially trust, between people in organisations influence the information flow, and the way decision-makers will use and perceive the information (Bennett <i>et al.</i> 2001; Piercy 1979; Webster <i>et al.</i> 1972).	Trust and confidence in other people caused by intra-organisational relationships affects the way actors utilise resources to support their decision-making.	Trust and confidence are proven to influence the ways decision-makers utilise resources.
3) Organisational technology	Levels of technology available within organisations influence business buying behaviour (Parkinson 1994; Webster <i>et al.</i> 1972).	Levels of technologies available to organisations influence resource utilisation, but it also depends on other factors too, such as ease of use, knowledge of the users, and so on.	Levels of technology are proven to have some effect on resource utilisation, but further study is required to understand the inter-relationship with other factors.

**Table 9.1: Factors and influences (Cont.)**

Factors	Literature/proposition	Findings	Revealed/disconfirmed
4) No. & value of customers	In the B2B organisation, there are fewer but larger customers (Dwyer <i>et al.</i> 2001; Ford 2002; Kotler 2001). This implies that some customers are more important than others. Proposition 1: The more relatively valuable the customers are, the more they utilise the resources with anarchy.	The findings showed that the value of customers was not necessarily determined by number of customers. Yet, when making decisions related to higher value customers, the actors tended to employ more anarchy in using resources.	The number of customers is not always determining the value of customers. Yet, the findings proved that the value of customers influences resource utilisation
5) Supplier-customer relationships	Different types of integrations and time periods influence information flows (Berthon <i>et al.</i> 2003; Dwyer <i>et al.</i> 2001; Kotler 2001). Based on the literature, it can be stated that: decisions regarding the short-term or distant customers utilise resources in a foie-gras way.	The actors utilise resources with relatively more anarchy when performing activities related to long-term or closed relationships with customers, which is correspondent with the proposition.	Distant of Supplier-customer are to have influence on resources utilisation rather than the types of integrations or time periods
6) Nature of demand	The nature of demand is considered in terms of derived demand (Haas 1976; Kotler 2001). Proposition 3: If the demand is solely derived from customers, the actors may utilise the resources in a foie-gras way.	Demand is derived from end-users; the actors utilise the resources with relatively more anarchy, which is in accord with the proposition.	Derived demand is proved to influence the ways the decision-makers utilise resources.

**Table 9.1: Factors and influences (Cont.)**

Factors	Literature/proposition	Findings	Revealed/disconfirmed
7) Market environment	In different market environments, especially in a competitive market, the actors may require different decision-support (Ashill <i>et al.</i> 1999; Ashill <i>et al.</i> 2001; Kotler 2001; Xu <i>et al.</i> 1995).	In a highly dynamic market, the actors interact with resources with relatively more anarchy.	The dynamics of the market is proved to influence resource utilisation, not the other variables.
8) Management styles	This factor is discussed later during the analysis.	In a family-run business and a modern family-run business, the actors tend to utilise the resources with relatively more anarchy; while under a Western style of management, the actors tend to utilise the resources with relatively more foie-gras.	Styles of management have been proven to have a significant effect on resource utilisation
9) Types of decisions	When making programmed and non-programmed decisions (i.e. routine and challenges) the actors may desire different types of support (Miller <i>et al.</i> 1997; Simon 1960).	When dealing with programmed decisions, the actors tended to exercise their resources with relatively more foie-gras.	It has been confirmed that the actors act differently for different types of decisions. Decisions have been classified as programmed and non-programmed.

### **9.3 Contributions of this study**

This section discusses the contributions of this research to both academic and management practice. This research combined and overlapped with the subject areas of marketing and information systems (i.e. the usage of MkIS to support business marketing activities). The research findings have the potential to benefit both areas, particularly in B2B marketing and information system implementation challenges. In addition to academic developments in these subject areas, practical recommendations are presented as a guideline for the design, implementation, improvement, and/or choice of the most appropriate MkIS for organisations and their personnel.

#### **9.3.1 Contributions to the study of marketing**

Much of the available research that focuses on resource management has been based on classical assumptions of marketing (i.e., homogeneity and one-directed dependence). This research study has developed the idea that resources are heterogeneous and mutually dependent, which is how resources in business markets are (Hakansson *et al.* 2004). These research findings contribute towards filling this gap in the literature by providing an improved understanding of how actors utilise resources to support their decision-making. Moreover, the conceptual framework was developed based on the main business buying decision-making models of Webster and Wind (1972) and Kotler (2001). These two models identify factors that influence business buying decision-making, yet the analysis is only limited to buying decisions. This study further extended the scope of the academic research to cover influences on general marketing decisions in B2B context. Furthermore, these research findings are likely to assist actors in understanding ways in which they can utilise resources in a more efficient way. Moreover, this increased understanding will help users to communicate the resources they desire with the providers, which may result in a more effective use of resources.

As a set of factors are initially drawn from various literatures as potentially have influence on the resource utilisation as discussed in Chapter 2 and presented in the conceptual framework (see Figures 2.8, 2.9, and 3.2). However, this case research has identified a number of factors that



influence resources utilisation of decision-makers. Most of these factors: experience and skills of the decision-makers, intra-organisational relationships, organisational technology, number and value of customers, supplier and customer relationships, nature of demand, market environment, and types of decisions are complied with the conceptual framework (see Figures 2.8 and 2.9), yet, there is one factor that was not included, which is styles of management. These findings have underlined a set of factors that influence resource utilisation in that could be used as a framework for further study.

### **9.3.2 Contributions to the study of information systems**

Although this thesis was heavily built on the marketing literature, this research also advances the study of IS, especially IS usage, by focusing on how actors utilise the requisite resources (MkIS) to support decision-making. These findings provide a good illustration of how people use IS in functional areas (by using MkIS) to support their decision-making. Moreover, the findings also provide a better understanding about the way actors utilise resources under different forces from various factors (i.e., how actors interact with the resources and make sense of them under the influence of different forces of the factors). This research has also indicated the need for further research on the usage of IS in functional areas such as marketing, finance, accounting and so on. Those in each area have different needs, desires and demands for information to support their decision-making. They may prefer different packages for IS to support their decisions. This further research can lead to new ways of developing, designing, and/or implementing IS in organisations to best suit their needs.

As the findings have identified factors that influence resource utilisation of decision-makers (see Figure 9.1 and Table 9.1) and the resources is MkIS, so that those factors influence utilisation of MkIS, one of IS. These factors, therefore, may influence the other functional IS as well as the IS for the whole organisation. This research has indicated the need for further study on the influence of these factors on the utilisation of functional IS and the IS for the whole organisation.

### **9.3.3 Contributions to both marketing and information system fields**

The research findings demonstrate that the success and/or the failure of IS implementation and usage in marketing departments or organisations are influenced by B2B related factors and additional factors set out in Table 9.1. Even though this research study shows that these factors influence the ways decision-makers utilise resources, further research is required to explore their effects on resources utilisation, and gain a deeper understanding. Moreover, this case research highlights the importance the integration of marketing and IS knowledge for successful IS implementation in any organisation, as well as the importance of B2B marketing. This indicates the need for more research on IS as well as the afore-mentioned functional areas.

There are many IT tools available in B2B organisations to support marketing decision-making, MkIS is one of them. The term MkIS was coined since 1967 (Cox *et al.* 1967), and have been used in various literatures (e.g. Assmus 1977, Kotler 2001, Sisodia 1992). In this case research, the resources, MkIS, have been classified into human resources, physical facilities and IS/IT tools. This is a broad definition of the term. Further research is needed looking at the specifics of different types of MkIS.

### **9.3.4 Practical recommendations**

These research results suggest that when an organisation likes to develop and/or implement any information technology, new business processes, or new resources to support its decision-making, the providers should consider the pertinent factors, and determine what the integrators and users expect from the new system(s) or new feature(s) to meet their expectations without wasting time and money. The integrators and users could also employ the results of this research to request that resources be developed to suit their requirements to improve the effectiveness of resource utilisation. Based on strengths and weaknesses discussed in the previous chapter, there are three sets of alternative recommendations for any B2B organisations want to improve the effectiveness of their marketing decision-making by providing better resources to suit their decision-makers. The three sets of configurations were written based on the nature of the actors, and the factors that influenced their resource utilisation. The most

important thing was for their organisations to understand the nature of their decision-makers, their experiences, preferences, and expectations. Table 9.2 presents the main characteristics of the three options, namely freedom, mixture, and force-fed. These three are suggested based on the following concepts of resource utilisation, namely anarchy, hybrid, and foie-gras

The freedom configuration would be appropriate for organisations whose decision-makers enjoy the freedom to gather their own decision-support material and their own experiences. This option would benefit the organisations where the decision-makers have a good understanding of the nature of decisions, the desired decision-support system, and how to obtain it. This option may also suit small organisations that have only a few decision-makers, such as NY Sugar, in terms of budget spending on the development of resources provided to the relevant actors.

**Table 9.2: Main characteristics of the decision-making and resources utilisation configurations**

<b>What dimensions are you encapsulating in this direction?</b>	<b>1<sup>st</sup> option: Freedom</b>	<b>2<sup>nd</sup> option: Mixture</b>	<b>3<sup>rd</sup> option: Force-fed</b>
	Basic to intermediate level of technology provided	Intermediate to advanced level of technology provided	Advanced level of technology provided
	High experience decision-makers	Medium- to high experience decision-makers	Relatively less experienced decision-makers
	Allows decision-makers to search for decision-support from various sources	Allows decision-makers to search for some decision-support as well as provide them with adequate sources that can be easily stored	Supplies decision-makers with almost all adequate sets of facts leaving as little gap as possible

The second option is suitable for organisations that would like to provide their decision-makers with some sets of facts, or even almost all the facts, they may require. Yet, the organisations also allow decision-makers to utilise resources in their own ways (i.e., they may use the facts provided by

the system(s), other sources, or both) to satisfy the employees and obtain the best possible solutions. However, the decision-makers using this option need to be able to digest the data obtained from various sources.

The third option, force-fed, suits organisations that intend to provide their actors with all necessary support for taking decisions. In this case, the organisations ought to develop and implement adequate information system(s) to store sets of facts and provide the requisite level of decision-support. Moreover, the organisations need to ensure that the data/information input in the systems is accurate and up-to-date, and that the decision-makers are happy to be fed with the appropriate decision-support and trust the system(s). The third option would be more appropriate for organisations that would like to have information flow through in and out to ensure that every actor has similar sets of facts to support his or her activities. The decision-makers in these organisations should also be capable of learning new things, be well trained, and understand benefits of IS/IT tools and other resources that the company has provided.

However, these three options are only recommended examples that organisations may use as guidelines when they are considering developing or implementing MkIS, especially IS/IT tools, to obtain the greatest benefit from these systems and to have higher returns on their investment into resources.

#### **9.4 An evaluation of limitations**

Access to organisations, individuals within those organisations and the commercially sensitive materials held by those individuals added to the time and budgetary limitations of this study. The combination of these factors led to a number of pertinent issues. The first concerned the extent to which the research findings and methodology can be generalized and applied to other contexts. The research was conducted in Thailand, and it is pertinent to ask whether similar would be obtained in other countries. Some commentators may argue that management principles are generally applicable to all geographical contexts. Some may also argue that the results would be different because of cultural influences. This research was grounded on the assumption that the findings would be applicable for

all types of management. Moreover, since this study was based on a case-based research method, some people may doubt whether its conclusions can be generalized to other contexts. However, as discussed previously, this research aims to achieve an analytical rather than statistical generalisation.

Time was another limitation of this study, both the time to complete the research, and the availability of respondents to comprehend and reflect upon the questions posed, and indeed, to convey their attitudes and behaviour. The limited time available with the case companies may have limited our ability to explore many other pertinent issues on emergent factors that became apparent during and after the interviews. The number of respondents due to the limited availability of respondents was another concern, especially since there was access to only one respondent at NY Sugar. The actual focus of this research could be considered as a limitation. Focusing only on the conceptual framework and its factors, it is inevitable that some issues will be beyond the scope of the study such as national and organisational culture, power relations or trust, to name a few.

Access to other actors within the networks of the case organisations was also of concern. In addition, the influence of the dominant type of networks could have been better understood if the cases selected had clearer types of network, such as those used at Toyota and IBM. The three selected cases were dominated by distribution networks in which some people worked with both suppliers and customers. Such people actually dealt with both types of networks, and stated that they perform differently when dealing with each network. It was difficult to draw any firm conclusions over the influences of the dominant type of network based on the limited amount of data collected.

The comparability of the three cases could be another criticism. Although there were an uneven number of respondents working in different industries and environments, they displayed a deep understanding of each organisation and its attributes. They also all worked in B2B organisations and dealt with marketing decision-making. Since they all worked in different environments and were given similar (i.e., Siam City Cement and Olympic) and different (i.e., NY Sugar and the other two cases) types of

resources, these differences provided effective insights into the ways actors utilise their existing resources, as well as the influence of each factor on resource utilisation. These go well with the aim of the research which is to understand the interactions of actors and resources. Moreover, while the interview data may seem quantitatively uneven, it was qualitatively comparable due to the research's rigour, triangulation, awareness of structural influences, and its flexibility. For example, in the case of NY Sugar, only one respondent was interviewed, but the response was very rich, and this was supplemented with data from other sources, including the owner, journals, and relevant government publications. Hence, the data provided ample and credible material for the researcher to answer the research questions, and opened up interesting avenues for further investigation. Lastly, the language of the interviews was another challenge and possible limitation, especially for translations. The translation of concepts and questions into Thai, and then answers from Thai to English, could have resulted in the loss or distortion of many of the subtleties of language, and Thai cultural and social context that the interviewees communicated in during the interviews. This was particularly problematic, when certain Thai words did not have a direct corresponding word in English.

## **9.5 Further research suggestions**

As discussed in the limitations section, further research could be conducted to strengthen the results and minimise the limitations. These include the following suggestions:

- First, to cope with the generalisation issue, more research could be conducted on different cases selected from different countries to compare with the findings of this study, and to investigate possible cultural effects. For example, suitable case-studies could include Procter & Grumble, Redbull, or Toyota. These companies operate in many countries around the world, and would provide a great opportunity to study cultural effects, and ascertain the extent to which it is possible to generalize the results in this study.
- To draw reliable statistical conclusions, further research could be conducted by employing the resultant framework set out in Figure 9.1 to develop sets of appropriate questionnaires for the B2B marketing decision-makers. This could be with the same population

frame as in this thesis, and/or in the other organisations in Thailand, and/or in other countries to test these findings, and draw appropriate conclusions from the statistical data.

- Third, to clarify the possible effects of the dominant types of networks, different case-studies, such as Toyota, who clearly operate under the supplier network using the similar research design could also strengthen the results.
- Forth, future research could also drill deeper and zoom in on issues that were beyond the scope of this study, such as national and organisational culture, power in relations or trust among people in the organisation. This will provide an even better understanding of factors and influences on resource utilisation.
- Further research could be conducted which focuses on the influences of personal and interpersonal, organisational, macro-environment as well as decision related factors on resource utilisation.

## **9.6 Personal reflections**

This four year period has been a challenging time to conduct this research. It was my first experience of qualitative case-based research using in-depth interviews as the main data collection method. As discussed in Chapter 4, I had previously conducted quantitative research, which sometimes contained open-ended questions or small semi-structured interviews. However, this thesis was completed in a qualitative manner as far as possible, even though I sometimes felt that a quantitative approach would also enrich this research. The challenges started in the early stages, when forming research questions, writing out the research design, choosing the methodology and method of data collection, developing interview issues and questions, data reduction, data analysis, learning how to analyse qualitative data using NVIVO as a tool, and in writing the thesis itself. All these steps were certainly challenging and a big learning experience. After completing the final sentence of the thesis, I was asking myself 'If I could go back, what I would do to improve this thesis?'. On careful reflection and analysis of the thesis, there are considerable weaknesses that I would eliminate. Although I would use a similar research design, research through case-studies, I would also conduct a sample survey. A close-ended questionnaire developed from the results of this research targeted at

the other people working in the three case-studies who deal with marketing decisions. This would enrich the data, and provide results with greater validity. I would also like to research another case study with the same research method, but in a different environment, such as at Toyota, to compare the influence of the type of networks, as Toyota is dominated by a supplier network, unlike the three case-studies. It is, however, rather difficult to have access to a company such as Toyota without the relevant connections. This could provide a better understanding about the influence of the last B2B related factor on resources utilisation.

Another concern was language. Languages became a major obstacle twice during the study. The first time was the translation of the interviews from Thai to English which was very challenging, as a literal translation was not possible. Some words did not have a direct match in English, so they were translated using words with the nearest equivalent meanings. The second time was during the writing up period. Writing requires a high level of discipline and use of the right language (e.g., vocabulary and grammar etc.). Sometimes, I felt that I knew very little and would be unable to complete the thesis because I was at a loss for words, especially when I had to write using unquantifiable words that are used in qualitative research. I have attempted to re-write and eliminate the quantifiable words out of this thesis as much as possible; they may, however, remain in some part of this thesis.

## **9.7 Conclusion**

Based on results of this research, it is concluded that decision-makers utilise resources in different ways which are along the continuum of the spectrum between the two extremes: foie-gras and anarchy. The nature of the resource use is greatly influenced by three B2B-related factors, namely, the number and value of customers, supplier-customer relationships and the nature of demand, as well as other factors such as levels of experience/skills, intra-organisational relationships, organisational technology, the market environment, management style, and types of decisions. These factors influence the ways actors utilise their resources interdependently; change in one of them could possibly alter the others to influence resources utilisation in a different way. As set out before, some of these findings are similar to the suggestions of Webster and Wind (1972)



and Kotler (2001). Some of them are distinct, and further study is required to develop improved and better understandings.

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## **APPENDICES**

## Appendix A: Lists of Respondents<sup>26</sup>

Interviewees' Number	Position	Cases
Interviewee A1	Marketing Manager	NY Sugar
Interviewee B1	SAP manager	Siam City Cement
Interviewee B2	E-commerce manager	Siam City Cement
Interviewee B3	WebSales officer	Siam City Cement
Interviewee B4	Executive vice president	Siam City Cement
Interviewee B5	Sale representative	Siam City Cement
Interviewee B6	Sale representative	Siam City Cement
Interviewee B7	Sale representative	Siam City Cement
Interviewee B8	Pricing analyst	Siam City Cement
Interviewee B9	Pricing manager	Siam City Cement
Interviewee B10	System analyst	Siam City Cement
Interviewee B11	Junior marketing analysis	Siam City Cement
Interviewee B12	Technical sale department (TSD) manager	Siam City Cement
Interviewee B13	Marketing activities section manager	Siam City Cement
Interviewee B14	Regional sales manager	Siam City Cement
Interviewee B15	Area Marketing analyst	Siam City Cement
Interviewee B16	Marketing activities officer	Siam City Cement
Interviewee B17	National sales department (NSD) manager	Siam City Cement
Interviewee B18	Markets development manager	Siam City Cement
Interviewee B19	Area manager	Siam City Cement

<sup>26</sup> Most positions are assigned to specific area, however, if specified the area it would be contradicted to anonymity consent.

<b>Interviewees' Number</b>	<b>Position</b>	<b>Cases</b>
Interviewee B20	Marketing activities manager	Siam City Cement
Interviewee B21	Marketing activities officer	Siam City Cement
Interviewee B22	Account executive	Siam City Cement
Interviewee B23	Area manager	Siam City Cement
Interviewee C1	Information resources manager – trading corporate information resources	Olympic
Interviewee C2	Application development manager	Olympic
Interviewee C3	Application development manager	Olympic
Interviewee C4	Customer services representative manager	Olympic
Interviewee C5	Customer services representative	Olympic
Interviewee C6	Director / owner	Olympic
Interviewee C7	Marketing communication manager	Olympic
Interviewee C8	Vice president general sales	Olympic
Interviewee C9	Product manager	Olympic
Interviewee C10	Product manager	Olympic
Interviewee C11	Sale representative	Olympic
Interviewee C12	Managing director	Olympic
Interviewee C13	Product manager	Olympic
Interviewee C14	Sale representative	Olympic
Interviewee C15	Sale representative supervisor	Olympic
Interviewee C16	Logistic planning supervisor	Olympic

<b>Interviewees' Number</b>	<b>Position</b>	<b>Cases</b>
Interviewee C17	Customer services representative	Olympic
Interviewee C18	Customer services representative supervisor	Olympic
Interviewee C19	Sale representative	Olympic
Interviewee C20	Sale representative	Olympic

## Appendix B: Key questions in English and Thai<sup>27</sup>

Issues	Questions in English <sup>28</sup>	Questions in Thai
<b>General issues</b> <ul style="list-style-type: none"> <li>to start the interview and gather general idea about the company and the interviewees responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>Could you describe about <ul style="list-style-type: none"> <li>Your company and its <b>environment</b>?</li> <li>Your <b>roles and responsibilities</b>?</li> </ul> </li> <li>What is the core business of your company?</li> <li>Who are the <b>competitors</b> and how does its <b>competition situation</b>?</li> </ul>	<ul style="list-style-type: none"> <li>ขอทราบรายละเอียดเกี่ยวกับ <ul style="list-style-type: none"> <li>บริษัทของท่าน และสิ่งแวดล้อมของบริษัท?</li> <li>หน้าที่และความรับผิดชอบของท่าน?</li> </ul> </li> <li>ธุรกิจหลักของบริษัทท่านคืออะไร? กรุณาอธิบายโดยสังเขป</li> <li>สถานการณ์การแข่งขันของบริษัทเป็นอย่างไร? และใครคือคู่แข่งของบริษัทของท่านบ้าง?</li> </ul>
<b>Individual and interpersonal related</b> <ul style="list-style-type: none"> <li>Decision areas/ responsibilities</li> <li>Objectives and goals of organisation</li> </ul>	<ul style="list-style-type: none"> <li>What are your current <b>position</b> and the <b>job description</b>? Could you give me an example of decisions you often deal with? Have you <b>work in related area</b> before?</li> <li>How do you know and understand your company's goals and objectives? Could you tell me</li> </ul>	<ul style="list-style-type: none"> <li>ปัจจุบันท่านทำงานในตำแหน่งงานใด? มีลักษณะงานอย่างไร? กรุณายกตัวอย่างการตัดสินใจที่ท่านทำเป็นประจำ? ท่านเคยทำงานที่เกี่ยวข้องกับการตัดสินใจเหล่านี้มาก่อนหรือไม่?</li> <li>ท่านทราบและเข้าใจเป้าหมาย และวัตถุประสงค์ขององค์กรของท่านหรือไม่? อย่างไร? กรุณาอธิบายเป้าหมาย และวัตถุประสงค์ขององค์กรของท่าน และท่านรู้สึกอย่างไรกับเป้าหมาย และวัตถุประสงค์เหล่านี้?</li> <li>ท่านจบการศึกษาสูงสุดในระดับใด? สาขาวิชาใด? มันมีความเกี่ยวข้องอย่างไรกับงานที่ท่านทำ และการตัดสินใจของท่าน?</li> <li>ท่านทำงานมาทั้งหมดกี่ปี? ท่านทำงานในบริษัทนี้มาทั้งหมดกี่ปี?</li> </ul>

<sup>27</sup> The table presents only key questions that were asked of every respondent, although the order and wording might have differed. Each respondent was also asked other questions to elaborate or clarify their answers if the respondent did not say enough about a particular topic and I pushed/probed them to explain in more detail or in another way. Moreover, some additional questions followed the respondents' answers as they emerged during the interviews.

<sup>28</sup> Colours are used to highlights key words to identify factors and resources utilisation of the respondents. **Pink** is used for B2B related factors; **purple** is used for personal and interpersonal related factors; **orange** is used for organisational related factors; **blue** is used for macro-environment related factors; **yellow** is used for other related factors; and **red** is used identify the influences and ways the actors utilise resources.



<ul style="list-style-type: none"> <li>Existing IT/IS/Applications in the organisation – how the respondent interacts with them</li> <li>Types of support – expected and accepted</li> <li>Limitations of gathering support</li> <li>Style of decision-making</li> <li>Complete direction</li> <li>Partial direction</li> <li>Scope of work, work individually</li> <li>Problem-solving style</li> <li>Directive</li> <li>Analytical</li> <li>Conceptual</li> <li>Behavioural</li> <li>Skills/expertise</li> </ul>	<p>what are the goals and objectives of your organisation? What do you think about them?</p> <ul style="list-style-type: none"> <li>What is the highest <b>education</b>? Is it related to <b>your current responsibilities / job descriptions</b> and <b>your decision-making</b>?</li> <li>How <b>many years</b> that you are working in total, for the company, and in this position? <ul style="list-style-type: none"> <li>Do you have any <b>experiences working</b> in the same position in other industry or other companies?</li> </ul> </li> <li>What <b>types of support</b> would you like to obtain when making decisions? Could you give me some example of decisions you <b>usually dealing</b> and how would you <b>gather decision-support</b>? What are the <b>limitations/problems</b> you encountered when making these decisions and how did you deal with them?</li> <li>Could you also give me example of decisions that you feel it is <b>challenged</b> you and <b>how did you deal with it</b>?</li> <li>How do you <b>prefer instructions</b> to be given when you are assigned a work?</li> <li>Are there any situations would you prefer to have <b>complete instruction or direction</b> and <b>how</b></li> </ul>	<p>และท่านทำงานในตำแหน่งนี้มาทั้งหมดกี่ปี?</p> <ul style="list-style-type: none"> <li>ท่านมีประสบการณ์ในการทำงานในตำแหน่งเดียวกันนี้ในอุตสาหกรรมอื่น หรือ บริษัทอื่นหรือไม่ อย่างไร?</li> <li>ท่านอยากได้รับตัวช่วยในการตัดสินใจแบบใด? กรุณายกตัวอย่างการตัดสินใจที่ท่านทำเป็นประจำ และท่านทำอย่างไรเพื่อให้ได้มาซึ่งตัวช่วยเหล่านั้น? มีข้อจำกัด/ปัญหาใดบ้างที่ท่านพบในการกระทำต่างๆ เพื่อให้ได้มาซึ่งตัวช่วยเหล่านั้น? และท่านทำอย่างไร?</li> <li>กรุณายกตัวอย่างการตัดสินใจที่ท่านเห็นว่าเป็นสิ่งท้าทายสำหรับท่าน และท่านปฏิบัติกับมันอย่างไร?</li> <li>ท่านอยากได้รับคำสั่ง/ข้อเสนอแนะอย่างไรในการทำงานต่างๆ ที่ได้รับมอบหมาย?</li> <li>มีสถานการณ์ใดที่ท่านอยากได้คำสั่ง/ข้อเสนอแนะอย่างสมบูรณ์ โดยละเอียด หรือไม่ อย่างไร?</li> <li>มีสถานการณ์ใดที่ท่านไม่อยากได้คำสั่ง/ข้อเสนอแนะเลย หรือไม่ อย่างไร?</li> <li>ในขณะที่ท่านประสบกับปัญหานั้นๆ, ท่านปฏิบัติต่อมันอย่างไร? <ul style="list-style-type: none"> <li>เป็นขั้นเป็นตอน? อย่างไร? กรุณาอธิบาย</li> <li>ถามหรือปรึกษาผู้อื่น? อย่างไร? กรุณาอธิบาย</li> <li>ทำงานเป็นทีม? อย่างไร? กรุณาอธิบาย</li> </ul> </li> </ul>
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<ul style="list-style-type: none"> <li>Education</li> <li>Years of working in this position</li> <li>Length of time working in this organisation</li> <li>Past experiences</li> </ul>	<ul style="list-style-type: none"> <li>did you deal with them?</li> <li>Are there any situations would you prefer not to have instruction or direction and how did you deal with them?</li> <li>When you have the problem(s), in what ways would you do to deal with the problem? <ul style="list-style-type: none"> <li>Step-by-step</li> <li>Talk to people</li> <li>Teamwork</li> </ul> </li> </ul>	
<p><b>Organisational related</b></p> <ul style="list-style-type: none"> <li>Organisational structure – Mechanic vs. Organic</li> <li>Centralised vs. Decentralised</li> <li>Job rotation or not</li> <li>Existing technology – IS/IT/Application in the organisation – Types of technology</li> <li>Personal and interpersonal conflicts</li> <li>Personal</li> </ul>	<ul style="list-style-type: none"> <li>Could you explain your organisational structure? How do you feel with it?</li> <li>How the organisational structure does affect your activities especially on how you use the resources to support the decisions?</li> <li>Have you ever request data/information from people in both your department and other departments? How did you make the requests and the outcomes? Is it readily forthcoming? How did you use that data/information to support your decisions?</li> <li>To what extent are you reliant upon people (e.g. your colleagues) in your organization for data/information you need?</li> <li>Relationship with colleagues, both within and among departments</li> </ul>	<ul style="list-style-type: none"> <li>กรุณาอธิบายถึงโครงสร้างองค์กรของท่าน? ท่านรู้สึกอย่างไรกับมัน?</li> <li>โครงสร้างองค์กรของท่านมีผลอย่างไรต่อกิจกรรมต่างๆ ที่ท่านทำ โดยเฉพาะอย่างยิ่งเกี่ยวกับการเลือกใช้ทรัพยากรต่างๆ เพื่อช่วยในการตัดสินใจของท่าน?</li> <li>ท่านเคยขอข้อมูลจากคนอื่น ทั้งในแผนกเดียวกัน, และแผนกอื่นๆ หรือไม่? ท่านขอข้อมูลนั้นๆ อย่างไร และได้ผลเป็นอย่างไรบ้าง? รวดเร็วไหม? ท่านใช้ข้อมูลนั้นๆ อย่างไรในการตัดสินใจของท่าน?</li> <li>ท่านเชื่อถือคนอื่น (เช่น เพื่อนร่วมงาน) มากน้อยเพียงไร?</li> <li>ความสัมพันธ์ของท่านกับเพื่อนร่วมงานทั้งใน และนอกแผนก <ul style="list-style-type: none"> <li>มีปัญหาหรือไม่? อย่างไร?</li> </ul> </li> <li>ระดับของเทคโนโลยีที่มีอยู่ในองค์กร – ที่คุณทราบ และใช้งาน? ทันสมัยหรือไม่ กรุณาอธิบาย?</li> </ul>

<p>relationships with colleagues, both within and between departments</p> <ul style="list-style-type: none"> <li>▪ Role of conflicts of interest between departments</li> </ul>	<ul style="list-style-type: none"> <li>○ Are there any <b>conflicts</b>? How?</li> <li>▪ <b>Level of the existing technology</b> – as you <b>know and use</b>? Is it <b>advanced</b> technology or not please explain?</li> </ul>	
<p><b>B2B related</b></p> <ul style="list-style-type: none"> <li>▪ Number of customers vs. value of customers</li> <li>▪ Power of customers to negotiate</li> <li>▪ Treatment of customers – individual or standard</li> <li>▪ Supplier-customer relationship</li> <li>▪ Types of relationships, their effects</li> <li>▪ Degree of integration,</li> </ul>	<ul style="list-style-type: none"> <li>▪ Could you tell me in your opinions, who are <b>your customers</b> how important are they? How you or your organisation would <b>segment the customers</b> and tell who are more important?</li> <li>▪ In what <b>ways would you gather facts</b> to support decisions related to these <b>different customers</b>?</li> <li>▪ Did each customer have different <b>value/power</b> especially in influence on your decisions? How? Could you give an example of <b>how it is influence</b>?</li> <li>▪ How the <b>values of customers affect the decisions and the ways you utilise resources</b>?</li> <li>▪ How do you normally gather your <b>suppliers/customers/competitors</b> data/facts/information? Please give example?</li> <li>▪ How and to what extend your organization <b>share information</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ ในความเห็นของท่าน, ใครคือลูกค้าของท่าน และพวกเขามีความสำคัญอย่างไร? ท่านหรือองค์กรของท่านแบ่งกลุ่มลูกค้าอย่างไร และให้ความสำคัญของลูกค้าต่างกันหรือไม่ อย่างไร?</li> <li>▪ ท่านมีวิธีการอย่างไรในการรวบรวมข้อความจริงเพื่อช่วยในการตัดสินใจเกี่ยวกับลูกค้าต่างๆ เหล่านี้?</li> <li>▪ ลูกค้าแต่ละคนมีคุณค่า/อำนาจต่างกันหรือไม่ โดยเฉพาะอย่างยิ่งกับการตัดสินใจของท่าน? อย่างไร? กรุณายกตัวอย่างของผลกระทบของมัน?</li> <li>▪ คุณค่าของลูกค้ามีผลกระทบอย่างไรกับการตัดสินใจของท่าน และวิธีการใช้ทรัพยากรต่างๆ ของท่าน?</li> <li>▪ ท่านรวบรวมข้อมูลเกี่ยวกับซัพพลายเออร์/ลูกค้า/คู่แข่งของท่าน? กรุณายกตัวอย่าง?</li> <li>▪ องค์กรของท่านมีการใช้ข้อมูล หรือทรัพยากรร่วมกันกับลูกค้า/ซัพพลายเออร์ของท่านอย่างไรบ้าง? รวมเข้าด้วยกันแบบอัตโนมัติ? การใช้ร่วมกันต่างๆ นี้มีผลอย่างไรกับการรวบรวมตัวช่วยในการตัดสินใจของท่าน?</li> <li>▪ สินค้า/บริการของบริษัทของท่านมีอะไรบ้าง?</li> <li>▪ ในความเห็นของท่าน, อุปสงค์ของสินค้าของบริษัทของท่านเกิดจากผู้บริโภค และลูกค้าหรือไม่ อย่างไร? มันมีผลอย่างไรต่อวิธีการใช้ทรัพยากรของท่าน?</li> <li>▪ กรุณาอธิบายถึงห่วงโซ่อุปทานขององค์กรของท่าน? สมาชิกของห่วงโซ่อุปทาน? ช่องทางการจัดจำหน่าย? ในความเห็นของท่าน, สิ่งต่างๆ เหล่านี้มีผลอย่างไรกับการใช้ทรัพยากรของท่าน?</li> </ul>

<p>its effects</p> <ul style="list-style-type: none"> <li>▪ Sharing same technology – linked together or not</li> <li>▪ Nature of demand for products or services</li> <li>▪ Influence by either customers or end-users</li> <li>▪ Product adaptation</li> <li>▪ Ways of gathering information about end-users &amp; customers</li> <li>▪ Dominant types of networks</li> <li>▪ Supplier or distribution network</li> <li>▪ How to control and manage SC and Its effects</li> </ul>	<p>with your customers/suppliers? Automate integration? How does it affect the approach in gathering supports?</p> <ul style="list-style-type: none"> <li>▪ What are products/services your company offer?</li> <li>▪ In your opinions, how did the demands for the products depending on by end-users as well as the customers? How did it affect on the way you utilise the resources?</li> <li>▪ Could you explain your organization supply chain? Supply chain member? Distribution channels? In your opinions, how is it influence on the way you utilise the resources? - to determine the company's type of network</li> </ul>	
<b>Determination of Foie-</b>	<ul style="list-style-type: none"> <li>▪ In general, how do you prefer the resources to provide the support</li> </ul>	<ul style="list-style-type: none"> <li>▪ โดยทั่วไป, ท่านอยากได้รับทรัพยากรอย่างไรเพื่อช่วยในการตัดสินใจ และตอนนี้ท่านได้รับมันอย่างไร? ท่านรู้สึกอย่างไรกับ MkIS ที่ท่านได้รับในปัจจุบันนี้?</li> </ul>

<p><b>gras or Anarchy / degree of hybrid</b></p> <ul style="list-style-type: none"> <li>Ways of gathering 'facts' to support decision-making – preferred/ideal</li> <li>Resources provided in the organisations</li> <li>Have the respondent gathered some 'facts' by themselves &amp; give example</li> <li>Existing databases, IS, applications provided in organisations – use or not, how and why</li> <li>Marketing research, customer feedback – how are the respondents dealing with the information?</li> </ul>	<p>and <b>what are you currently received?</b> How do you feel with the current MkIS?</p> <ul style="list-style-type: none"> <li>Could you <b>explain your way of utilise the resources in general or that you often use?</b></li> <li>What are the existing resources including IT/IS tools, people, and physical facilities that available for you to support your decisions? <ul style="list-style-type: none"> <li>Within the lists, did you use them all to support your decisions? If not which one you used, and <b>how do you use them in general?</b></li> <li>Which one you did not used them, and <b>why you do not use them in general?</b> Any particular reason why you do not use them?</li> <li><b>How do you use those resources to support your decisions?</b> <ul style="list-style-type: none"> <li>How often</li> <li>What do they offer to you?</li> <li>Purposes of the systems?</li> </ul> </li> </ul> </li> <li>Have you ever conducted any <b>market research</b> in any purposes? How often? <b>How did you use the results found from the research?</b> If not, have you ever hired someone else to conduct research for you on your</li> </ul>	<ul style="list-style-type: none"> <li>กรุณาอธิบายถึงวิธีการใช้ทรัพยากรของท่านโดยทั่วไป หรือ ที่ท่านใช้บ่อยๆ?</li> <li>ระบบสารสนเทศทางการตลาด (MkIS) รวมทั้ง เครื่องมือทาง IT/IS, คน, และอุปกรณ์ต่างๆ ที่มีบริษัทจัดให้สำหรับช่วยในการตัดสินใจของท่าน มีอะไรบ้าง? <ul style="list-style-type: none"> <li>จากที่ท่านกล่าวมา, ท่านได้ใช้มันทั้งหมดเพื่อช่วยในการตัดสินใจ หรือทำให้ได้มาซึ่งตัวช่วยในการตัดสินใจของท่านหรือไม่ อย่างไร? ถ้าไม่มีอันไหนบ้างที่ท่านใช้ และท่านใช้มันอย่างไร?</li> <li>มีอันไหนบ้างที่ท่านไม่เคยใช้เลย? ทำไมท่านถึงไม่ใช้มัน?</li> <li>ท่านในระบบสารสนเทศต่างๆ เหล่านั้นอย่างไรเพื่อให้ได้มาซึ่งตัวช่วยในการตัดสินใจของท่าน?</li> <li>บ่อยแค่ไหน?</li> <li>พวกมันเสนออะไรให้กับท่านบ้าง?</li> <li>ท่านทราบหรือไม่ว่าจุดประสงค์ของระบบสารสนเทศนั้นๆ คืออะไร?</li> </ul> </li> <li>ท่านเคยทำวิจัยตลาดหรือไม่ อย่างไร? บ่อยแค่ไหน? ท่านใช้ผลที่ได้รับมานั้นๆ อย่างไร? ถ้าไม่เคยทำ, ท่านเคยจ้างผู้อื่นทำวิจัยตลาดให้ท่านในนามของบริษัทหรือไม่? กรุณาให้รายละเอียดเกี่ยวกับกระบวนการนั้นๆ ?</li> </ul>
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	organisation behalf? Could you give me the detail about that process?	
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## Appendix C: Sample of the trees and nodes used for data analysis<sup>29</sup>

### NODE LISTING

Nodes in Set: All Nodes

Created: 18/09/2005 - 22:05:24

Modified: 18/09/2007 – 23:10:30

Number of Nodes: 110

- 1 (1) /B2B related factors
- 2 (1 20) /B2B related factors/Nature of demand
- 3 (1 20 7) /B2B related factors/Nature of demand/demand for product adaptations
- 4 (1 20 7 9) /B2B related factors/Nature of demand/demand for product adaptations/derived from end-users
- 5 (1 20 8) /B2B related factors/Nature of demand/derived from customers
- 6 (1 20 13) /B2B related factors/Nature of demand/end user demand
- 7 (1 27) /B2B related factors/Supplier-customer relationships
- 8 (1 27 17) /B2B related factors/Supplier-customer relationships/Integrations with customers
- 9 (1 27 17 1) /B2B related factors/Supplier-customer relationships/Integrations with customers/Auction
- 10 (1 27 17 2) /B2B related factors/Supplier-customer relationships/Integrations with customers/Catalogue
- 11 (1 27 17 4) /B2B related factors/Supplier-customer relationships/Integrations with customers/Collaborative
- 12 (1 27 17 14) /B2B related factors/Supplier-customer relationships/Integrations with customers/Hierarchies
- 13 (1 27 18) /B2B related factors/Supplier-customer relationships/Integrations with suppliers
- 14 (1 27 22) /B2B related factors/Supplier-customer relationships/personal relationship
- 15 (1 27 22 3) /B2B related factors/Supplier-customer relationships/personal relationship/Closed relationships
- 16 (1 27 22 11) /B2B related factors/Supplier-customer relationships/personal relationship/Distant relationships

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<sup>29</sup> These trees and nodes were extracted from NVIVO after finishing the data analysis. They had been created and changed many times during the process.

- 17 (1 27 22 23) /B2B related factors/Supplier-customer relationships/personal relationship/Personal relationship with customers
- 18 (1 27 26) /B2B related factors/Supplier-customer relationships/Relationship
- 19 (1 29) /B2B related factors/Types of Networks
- 20 (1 29 12) /B2B related factors/Types of Networks/Distribution network
- 21 (1 29 28) /B2B related factors/Types of Networks/Supply network
- 22 (1 30) /B2B related factors/Values of customer
- 23 (1 30 6) /B2B related factors/Values of customer/customers
- 24 (1 30 10) /B2B related factors/Values of customer/Determine values of customers
- 25 (1 30 10 5) /B2B related factors/Values of customer/Determine values of customers/Customer Segmentation
- 26 (1 30 10 16) /B2B related factors/Values of customer/Determine values of customers/Influences of profitability of each
- 27 (1 30 10 25) /B2B related factors/Values of customer/Determine values of customers/Purchase volume of customers
- 28 (1 30 21) /B2B related factors/Values of customer/Number of customers
- 29 (1 30 24) /B2B related factors/Values of customer/power of customers
- 30 (1 30 24 15) /B2B related factors/Values of customer/power of customers/High power
- 31 (1 30 24 19) /B2B related factors/Values of customer/power of customers/Lower power
- 32 (4) /Organisational related factors
- 33 (4 1) /Organisational related factors/Organisational structures
- 34 (4 1 2) /Organisational related factors/Organisational structures/Organic
- 35 (4 1 2 8) /Organisational related factors/Organisational structures/Organic/Flat organisation
- 36 (4 1 2 9) /Organisational related factors/Organisational structures/Organic/Flexibility
- 37 (4 1 3) /Organisational related factors/Organisational structures/Mechanic
- 38 (4 1 3 1) /Organisational related factors/Organisational structures/Mechanic/Hierarchies



- 39 (4 7) /Organisational related factors/Conflicts with other people within department
- 40 (4 7 12) /Organisational related factors/Conflicts with other people between department
- 41 (4 7 26) /Organisational related factors/Conflicts with other people within department/trusts
- 42 (4 7 27) /Organisational related factors/Conflicts with other people between department/trusts
- 43 (4 21) /Organisational related factors/levels of technology
- 44 (4 21 10) /Organisational related factors/levels of technology/Advanced
- 45 (4 21 11) /Organisational related factors/levels of technology/Basic
- 46 (4 21 20) /Organisational related factors/levels of technology/Intermediate
- 47 (4 21 25) /Organisational related factors/levels of technology/technology available
- 48 (6) /Personal and Interpersonal related factors
- 49 (6 1) /Personal and Interpersonal related factors/Age
- 50 (6 2) /Personal and Interpersonal related factors/Authority
- 51 (6 4) /Personal and Interpersonal related factors/position
- 52 (6 7) /Personal and Interpersonal related factors/Educations
- 53 (6 7 13) /Personal and Interpersonal related factors/Educations/Places of study
- 54 (6 7 13 3) /Personal and Interpersonal related factors/Educations/Places of study/Thailand
- 55 (6 7 13 12) /Personal and Interpersonal related factors/Educations/Places of study/Overseas
- 56 (6 8) /Personal and Interpersonal related factors/Experience
- 57 (6 14) /Personal and Interpersonal related factors/Problem-solving styles
- 58 (6 14 1) /Personal and Interpersonal related factors/Problem-solving styles/Sensation feeling
- 59 (6 14 2) /Personal and Interpersonal related factors/Problem-solving styles/Sensation thinkers
- 60 (6 14 9) /Personal and Interpersonal related factors/Problem-solving styles/Intuitive thinkers
- 61 (6 14 10) /Personal and Interpersonal related factors/Problem-solving styles/Intuitive feelers
- 62 (6 15) /Personal and Interpersonal related factors/Responsibilities

- 63 (6 17) /Personal and Interpersonal related factors/Styles of decision-making
- 64 (6 17 1) /Personal and Interpersonal related factors/Styles of decision-making/Irrational
- 65 (6 17 2) /Personal and Interpersonal related factors/Styles of decision-making/Rational boundary
- 66 (6 17 3) /Personal and Interpersonal related f/Styles of decision-making/Rational decision-making
- 67 (7) /Macro-environmental related factors
- 68 (7 4) /Macro-environmental related factors/Economic influences
- 69 (7 4 1) /Macro-environmental related factors/Economic influences/Economic crisis
- 70 (7 5) /Macro-environmental related factors/Government influences
- 71 (7 5 7) /Macro-environmental related factors/Government influences/Law influences
- 72 (7 9) /Macro-environmental related factors/Market competition situations
- 73 (7 9 2) /Macro-environmental related factors/Market competition situations/Competition
- 74 (7 9 6) /Macro-environmental related factors/Market competition situations/High competition
- 75 (7 9 8) /Macro-environmental related factors/Market competition situations/Low competition
- 76 (8) /Decision-makers
- 77 (8 1) /Decision-makers/Integrators
- 78 (8 2) /Decision-makers/Providers
- 79 (8 3) /Decision-makers/Users
- 80 (9) /Other related factors
- 81 (9 3) /Other related factors/Management Styles
- 82 (9 3 1) /Other related factors/Management Styles/Western
- 83 (9 3 2) /Other related factors/Management Styles/Traditional Chinese family
- 84 (9 3 3) /Other related factors/Management Styles/Modern Chinese family
- 85 (9 6) /Other related factors/Level of decisions
- 86 (9 6 1) /Other related factors/Level of decisions/Operational
- 87 (9 6 8) /Other related factors/Level of decisions/Management
- 88 (9 6 17) /Other related factors/Level of decisions/Strategic
- 89 (9 11) /Other related factors/Priority of decisions

90	(9 11 7) /Other related factors/Priority of decisions/Long term strategic
91	(9 11 10) /Other related factors/Priority of decisions/Priorities
92	(9 11 16) /Other related factors/Priority of decisions/Short term dilemmas
93	(9 11 19) /Other related factors/Priority of decisions/Time wasters
94	(9 20) /Other related factors/Types of decisions
95	(9 20 1) /Other related factors/Types of decisions/Challenges / non-programmed decisions
96	(9 20 9) /Other related factors/Types of decisions/On-off decisions
97	(9 20 12) /Other related factors/Types of decisions/Routine / programmed decisions
98	(9 23) /Other related factors/Decision-making process
99	(9 23 5) /Other related factors/Decision-making process/Irrational
100	(9 23 13) /Other related factors/Decision-making process/Semi structure decision-making
101	(9 23 18) /Other related factors/Decision-making process/structured decision-making
102	(9 23 21) /Other related factors/Decision-making process/Unstructured decision-making
103	(10) /Resources utilisation
104	(10 1) /Resources utilisation/Anarchy
105	(10 3) /Resources utilisation/Existing resources
106	(10 4) /Resources utilisation/Rational boundary
107	(10 5) /Resources utilisation/Foie-gras
108	(10 7) /Resources utilisation/Rational decision-making
109	(10 9) /Resources utilisation/Resources in uses
110	(10 10) /Resources utilisation/Resources known but not use